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OBJECTIVE FINDINGS IN HEART DISEASE WITHOUT FAILURE*

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Mortality tables would indicate that heart disease is on the increase. True evaluation of the statistics is difficult, because of obvious discrepancies in the compilation of figures. The apparent rise in mortality from heart disease may be accounted for, to some extent at least, by more accurate methods of diagnosis. For example, twenty years ago the syndrome of coronary occlusion was unknown; while today, thanks to American investigators who have been responsible for the development of every phase of this syndrome, every textbook of medicine includes an accurate description of such a picture, and most practitioners today are constantly on the alert for this condition. "Acute indigestion" as the cause of death is now in most instances placed in the cardiac, rather than the gastrointestinal column.

In view of the fact that heart disease is on an apparent, if not a real increase, it is felt that one is justified at any time to review the subject of heart disease without failure in order that early diagnosis may be made and proper advice given the patient. It is important that early diagnosis be made; for once myocardial failure occurs, the patient immediately becomes a social liability rather than an economic asset.

The patient who gives no anamnestic findings of circulatory embarrassment presents a real problem for the examiner. It is occasionally necessary to carry the investigation into other fields than the circulatory in order that a proper evaluation may be made of the various findings.

INSPECTION

It is obvious that stripping to the waist is essential for the examination. Frequently inspection alone will give considerable indication of cardiac distress. Engorgement and fibrillary waves of the neck veins, when present, point to circulatory embarrassment. This, of course, is interpreted in the light of observations made in the sitting position, for it is not uncommon to find pulsating neck veins when the patient is in the dorsal recumbent position. Close inspection may reveal a visible displacement of the apical impulse. Displacement, either to the right or to the left, in the absence of pulmonary disease points at least to mechanical cardiac embarrassment. Having the patient in a correct position, as regards light, will at times disclose the presence of a pulsating tumor, suggesting an aneurism. This can best be elicited by having the patient tilt forward, the light striking from the side.

PALPATION

Palpation is a most important maneuver in the cardiac examination. The importance of this phase becomes apparent when it is recalled that a murmur which is not accompanied by a thrill is rarely an organic murmur. The presence of definite thrills indicates an abnormal flow of blood in the cardiac circuit. Thrills indicate an abnormal flow of blood in the particular region in which they are palpated and always mean cardiac pathological anatomy. Friction fremitus is indicative of changes in the heart or pericardium. Palpation in the second right interspace (aortic region) chest tilted forward and in enforced expiration will frequently elicit a diastolic shock in this region. When demonstrable, this sign indicates increased aortic tension and whether or not accompanied by subjective findings is strongly suggestive of present or future heart distress. Palpation of the pulse which reveals a rate consistently above 100 while at rest, or below 60, points to myocardial disease; for beyond these limits, the physiological integrity of the myocardium is encroached upon. A totally irregular pulse, or alternation of

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the pulse points again to heart pathology. The totally irregular pulse usually speaks for auricular fibrillation. In this connection, I would like to correct an old impression concerning the rate of the pulse in auricular fibrillation. The older authors were rather emphatic in the statement that auricular fibrillation is associated with a fast pulse. A more universal use of the electrocardiograph has repeatedly demonstrated that a slow pulse is not uncommon in untreated cases of auricular fibrillation. It might be well to add that the ventricular rate in many cases of auricular fibrillation, contrary to the older concept, is affected by exercise and excitement. Alternation of the pulse is not yet clearly understood, but its prognostic significance is of considerable importance. Palpation of the peripheral vessels should be included in the heart examination. While it is quite true that arteriosclerosis may be localized and proved at autopsy to be either cerebral, aortic, coronary, renal, or peripheral, nevertheless, demonstrable thickening and tortuosity of the peripheral vessels, changes in the fundal arteries, or loss of the dorsalis pedis pulsation would suggest a strong probability of at least a beginning sclerosis in the heart or great vessels.

PERCUSSION

Widening of the parasternal dulness, together with increased manubrial dulness, may point to aneurism or enlarged aorta of aortitis. Considerable enlargement either to the right or to the left, or both, of the cardiac area indicates either cardiac hypertrophy, dilatation, or pericardial enlargement. Left cardiac hyertrophy, when proved, usually but not always is indicative of high blood pressure of long standing and is to be interpreted as a definite sign of heart disease. An extension of the cardiac dullness to the right beyond the limits of normal does not mean right ventricular enlargement but signifies an enlargement of the right auricular area. Right ventricular hypertrophy as a rule can only be inferred, as the other symptoms and signs of heart disease are found in which the disturbed physiology alone can be interpreted in the light of an enlargement of this ventricle. Dilatation of the heart when demonstrable is frank evidence of true and permanent myocardial disease. Dilatation follows an over-stretching of the muscle fibers in the heart, a stretching beyond physiological limits with a loss of muscle tonus. While it may seem possible that with the proper treatment there may be a return to normal size and function, a careful study of these cases of dilatation will reveal that they are practically never capable of the stress and strain of former days. I should like to digress for a moment to condemn the practice of physicians in prescribing exercise for that individual who has passed middle life and who complains of increasing early morning and late afternoon lassitude. The elasticity of the youthful heart in this individual has gone, and sudden strain of physical exertion may do irreparable damage.

At the autopsy table at the Charity Hospital in New Orleans, Herrmann has frequently pointed out pericardial adhesions which were never suspected during life. Experimentally, he and Musser have demonstrated definite cardiac embarrassment attendant upon the formation of pericardial adhesions. With these facts and together with the occasional findings of enlarged cardiac areas without demonstrable cause, chronic adhesive pericarditis is no doubt much more common than is usually suspected. Percussion in various positions may at times show a fixation of the heart and point to possible pericardial disease.

AUSCULTATION

This method of examination is frequently the only method used. Too frequently is the presence of murmurs the only criterion of the examiner for the diagnosis of heart disease. Christian states that every patient at one time or other has had a heart murmur. The majority of murmurs are the so-called hemic or functional murmurs. To identify the murmur as an organic murmur, it is necessary to examine the patient in different positions, to accelerate the heart with exercise or drugs, and rule out certain diseases that might explain the presence of hemic or functional murmurs. To be positive concerning the diagnosis of an organic apical systolic murmur, one must have a demonstrable thrill accompanying the murmur. When an organic apical systolic murmur is demonstrated, it means valvular disease and myocardial distress may be expected. Apical and basal diastolic murmurs always mean organic heart disease. These sometimes disappear

when the heart is rapid, to reappear when the rate again becomes slow. Continuous hums, or blows, heard over the precordial region suggest abnormal currents of blood and are indicative of heart disease. When seen during the first two decades of life and in the absence of a specific history, they are most likely congenital. Pericardial friction sounds need only be mentioned in the light of previous remarks. Persistent hypertension observed during a period of several observations and while the patient is relaxed, even in the absence of demonstrable myocardial changes, signifies future heart trouble. To and fro murmurs heard over exposed arteries suggest arterial venous aneurism; and arterial venous aneurisms may explain the existing hypertension.

CHRONIC NEPHRITIS

Kidney disease, when chronic, is always accompanied sooner or later by cardiovascular chages. It is difficult at times, to diagnose chronic nephritis; but when sufficient laboratory evidence is present to make such a diagnosis, one is justified in suspecting myocardial disease whether or not it can be demonstrated.

ELECTROCARDIOGRAMS

The electrocardiograph is at times a distinct adjunct to the armamentarium of the physician in demonstrating myocardial disease. Various grades of auriculoventricular and intraventricular blocks, inversion of the T wave in leads 1 or 2 or both, the occurence of the coronary T wave, and paroxysmal ventricular tachycardia are definite diagnostic signs of myocardial disease revealed only by the electrocardiograph. They may be strongly suspected by other methods of examination but cannot be proved except by means of the electrocardiograph.

ABSCESS OF THE LUNG.

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Abscess of the lung has been of interest for several years and especially so the last two years. The literature and clinical cases have been studied from many points of view. When a patient has a delayed recovery following a general anesthetic and surgery or pneumonia, one is inclined to suspect pulmonary tuberculosis, which often happens and must be differentiated. Frequently after a few days following surgical procedure, especially the upper abdominal area, the patient will have a chill and begin running a septic temperature without any perceptible cause to be found around the operative area. In these conditions a lung abscess should be diligently searched for and differentiated from pneumonia, tuberculosis, or acute infectious conditions. Lung abscess in past years has received small attention. More recently with the advent of the X-ray and more experimental bacteriology lung abscess has been diagnosed as a common complication.

There has been two schools of workers; those believing lung abscess to be aspiratory in origin and the other thinking of it as an embolism and infarction. The former base their conclusion on the number of abscessed lungs following operation on the upper respiratory tract. Such men as Cutler[1], Weidleim and Herrmann[2], are inclined to embolism and infarction. The experimental work of these and other workers seem to focus on the fact that a small percent of lung abscesses may be aspiratory in origin and only when the material contains anaerobic bacteria or sufficiently occlude the bronchus to prevent the passage of air and damage the bronchial wall. Cutler, Weidleim, and Herrmann were able to produce enlarging pulmonary lesions with exudate containing the oral fusospirochetal organisms by emboli. Therefore the data available leads to the belief that we have two types of lesions, the bronchitic and the parenchymatous; the bronchitic most likely to be aspiratory and the parenchymatous embolic. Then there are lung abscessses following local infection such as pneumonia and fusospirochetal. Because of the similarity of symptoms of chronic abscess and pulmonary tuberculosis they must not be confused. The lack of physical findings in early abscess necessitates the frequent repeated use of the X-ray. The case reported below will demonstrate the inability to diagnose the abscess during the first few days of clinical symptoms and requires repeated search and raying. An acute abscess formation following surgery or pyogenic organisms may be ushered in by severe chill, high fever, cough, and expectoration of foul putrid material. The early symptoms of lung abscess may be more insid-

ious when of less virulent organism developing in an otherwise healthy person as pain, not aggravated by breathing, dry hacking cough, very little sputum, chills or chilliness, elevation of temperature, anxious facial expressions soon followed by more profuse expectoration of very foul odor sometimes greenish but mostly rusty chocolate color. The fever becomes higher and remains so until there is an evacuation with free drainage which is often spontaneous into the bronchus. Physical signs depend on the size and location of the abscess but generally very obscure. There may be signs of consolidation, bronchial breathing, increased whispered voice, and a few irregular rales similiar to those found in a small area of tuberculosis. The X-ray will show the typical dense shadow homogeneous in character, thinning irregular border surrounded by fairly normal looking lung tissue. The X-ray pictures should be made every few days. If the first picture is made with the first clinical symptoms it may not show any shadows as mentioned above, and should be repeated. Later during the illness a fluid level may be seen in the shadow which is pathognomic of cavitation. The sputum contains shreds of fibrin, pus cells and tissue cells. When collected in a conical glass will settle in three distinct layers.

The following case is typical of a wandering abscess the predominating organism the baccillus proteous vulgaris which is of low virulence. This abscess case report reveals the pathology change by the healing completely of the foci as other areas are broken down by the invading organism. The X-ray pictures further show cavity formation and cavity healing without infiltration of scar tissue around the cavity wall.

REPORT OF CASE

Male, 39 years of age. Married, two children; ages 6 and 10. No family history of lung affection. Past history: Measles and mumps during childhood; gunshot wound of right arm in 1920. Excellent previous health. No history of tonsillitis nor other throat infection. Frequent tuberculous contact the past ten years because of his work among the tuberculous patients.

This patient appeared for examination November 3, 1928. Complaining of pain near angle of scapula, deep dull aching in character not altered by respiration. Generally feeling of malaise, slight cough and no sputum. History of onset, night of October 31, 1928, patient awakened after midnight with a feeling of having slept in a cramped position of the right chest. Pain becoming gradually worse until seen November 3, 1928.

Physical examination November 3, 1928: patient well nourished. Anxious expression of the face. Weight 158, temperature 99, pulse 80, respiration 22, blood pressure: systolic 120, diastolic 80. Nothing abnormal elicited in the chest by palpation or percussion. Auscultation revealed slightly increased broncho-vesicular breathing; increased whispered voice and few rales between the angle of scapula and vertebral column, resembling tuberculosis.

PLATE No. 1.

An X-ray stereogram was made on November 3, 1928, which presented no shadow of abscess formation as is shown in Fig. No. I. The patient is a professional man and continued with his routine office work. November 5, 1928, he began expectorating a small amount of chocolate colored putrid material with a foul odor. The temperature was still running 99 to 99.6. November 6, 1928 the patient went to bed with more marked spasmodic cough and more expectoration; temperature becoming higher. The blood count showed a leucocyte count of 10,000; hemoglobin 84 percent differential normal, the urine was negative. The upper respitory tract and accessory sinuses were carefully examined but revealed no path-

ology. The sputum and cough became more severe and the paroxysms were accompanied with vomiting because of the putrid sputum and foul odor. The temperature for six weeks ran 101 to 102, then gradually subsided. The sputum was 6 to 12 ounces during a 24 hour period. The X-ray January 4, 1929 revealed an abscess as shown in Fig. No. 2.

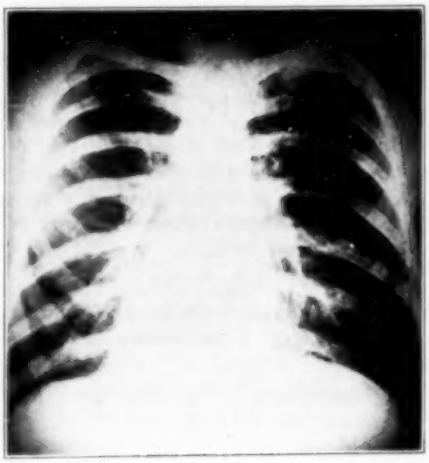

PLATE No. 2.

The patient was out of bed and returned to his office January 10, 1929 against advice. At this time the weight was 125. The succeeding five months the patient would have periods of 2 to 4 weeks of normal appetite, temperature and very slight cough and expectoration, gaining in weight. Following each period of quiescence there would be 24 to 48 hours of an absence of cough and expectoration followed by slight chill, high fever and sweating which would last about two days when profuse expectoration would relieve the symptoms. Each time an X-ray would show a new area of lung involvement with healing of the old focus. The acute exacerbation would show an elevation of leucocyte count which would return to normal following free drainage.

May 5, 1929 a severe attack of pleurisy developed that required three hypodermics of pantopon for relief. Codeine was given for two weeks because of the pain. The X-ray at this time showed marked pleuritic involvment and an abscess involving the parenchyma of the right lung beneath the pleura in the anterior axillary line near the 5th and 6th interspace. Patient was out of bed again June 7, 1929 and was in remarkable condition clinically until another attack July 15, 1929. The X-ray finding at that time is shown in Fig. No. 3, which was the first cavity

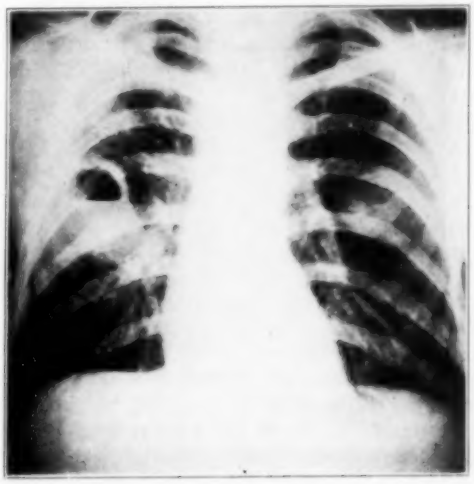

PLATE No. 3.

PLATE No. 4.

formation. The abscess reached the base of the right lung, the extent of pathology is shown in Fig. No. 4, made September 9, 1929. A phrenic neurectomy was done September 12, 1929, which relieved almost completely the severe paroxysms of coughing, the result of which is shown in Fig. No. 5, made September 19, 1929.

The sputum was persistently negative for any organism until April, 1929, when we found sacks of dark color containing innumerable bacilli of porteous vulgaris actively motile in the fresh specimen and

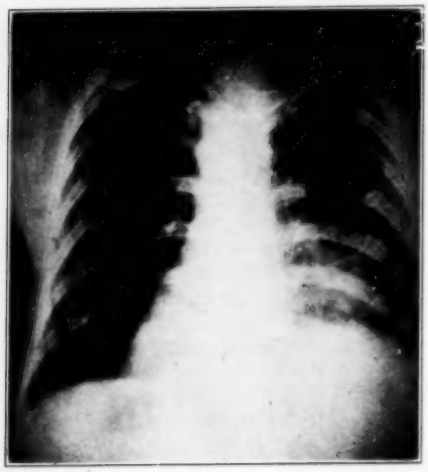

PLATE No. 5.

ranging from 5 to 40 microns in length, culturing well both aerobically and anaerobically. Being more prolific anaerobic. These bacilli were found periodically until November, 1929.

Neoarsphenamine was given October 26-28-31, which showed complete saturation by embarrassed respiratory reaction. Other treatment was postural drainage and codeine for cough. It was difficult to convince the patient of the necessity of suppressing the cough until the phrenic neurectomy was done then codeine was readily taken. The patient has made an uneventful recovery and has been free from all symptoms since about November 15, 1929. The result is shown by X-ray Fig. No. 6, made February 4, 1930.

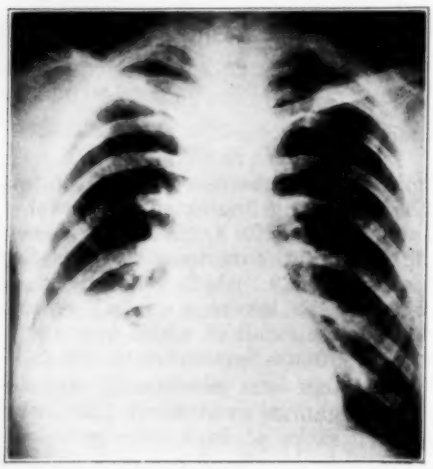

PLATE No. 6.

The primary goal in any abscess is drainage preventing invasion of new areas and destruction of the invading organism as far as possible. Treatment is medical, postural drainage, pneumothorax, arrestment of cough, phrenic neurectomy, absolute bed rest. Open surgical interference should be the last resort and only when the above methods have been used. Then when the abscess is near the pleura and adhesions have naturally formed or been artificially produced.

Singer and Graham[3] report a mortality of 46 percent with operation. They quote Lockwood reporting 1117 cases operated with a 34.6 percent mortality. In Lockwood's own series a surgical mortality of 41 percent. But this mortality rate should not deter the surgeon when the more conservative treatment fails.

CONCLUSIONS

1. Lung abscess must be differentiated from pulmonary tuberculosis because of similarity of symptoms.

2. Physical and X-ray findings may be negative during the first few days of clinical symptoms.

3. Non-tuberculous cavities of the lung will heal without infiltration of the cavity wall and casting no X-ray shadow.

4. Perhaps the most disconcerting sequelae of surgical operation are lung abscesses.

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TREATMENT OF ANKYLOSIS BY ARTHROPLASTY—REPORT OF CASES*

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The treatment of ankylosis is a difficult problem. It is important to maintain good functional position of a joint in which ankylosis is likely to take place. On review of the literature on arthroplasty, it is astounding to note the small number

*Clinical material taken from records of the Bone and Joint Clinic, Tulsa.

of joints which have been maintained in the most advantageous position in the face of ankylosis. This has been an extremely careless attitude of a large part of the medical profession, as many stiff joints may be functional parts when in the proper position. Malposition often leads to many secondary deformities which add greatly to the complications of the future operative procedure. In our daily practice, we see ankylosed knees with 35 to 50 degrees of flexion, knock-knee and subluxation.

The exact position for ankylosed joints is argued by authorities, but the variation is usually small and the consensus of opinion at present seems to be in brief—the shoulder in abduction of from 45 to 60 degrees with 5 to 10 degrees forward of the sagittal plain; the elbow in about 90 degrees of flexion, unless both elbows are involved; the wrist in hyperextension; the spine in hyperextension; the hip in 5 to 10 degrees of abduction and about 10 degrees of flexion and the ankle at right angles to the leg.

The actual treatment resolves itself into three procedures: manipulation, dissection and arthroplasty. The first two groups have proven more or less unsatisfactory and the latter has come to be the operative method of choice. When it has been determined that a patient's disability warrants an attempt at mobilization, the following factors must be considered: Will the joint lend itself well to arthroplastic measures; what is the origin and nature of the ankylosis; if it is infectious, is the disease quiescent; are the circumstances of the patient favorable from a social and occupational standpoint? Mobilization is justified, practically, in only five joints, namely: the temporomaxillary joint; the elbow; the knee; the hip and the first metatarsophalangeal joint. It is never considered in the ankle joint.

Mobilization, in purely traumatic cases, has some of the best results. Cases of acute infection, where sufficient time has elapsed (1 1-2 to 2 years since acute symptoms have subsided) are the next choice. The gonorrheal type lends itself the best of the last group. Tuberculous joints are rarely done. The osseus variety and the fibrous type, in which the cartilage of the joint has entirely disappeared, represent the largest group of cases in which mobilization may be considered.

There is another possibility which may enter the realm of mobilization; the fibrous union which is more firm and allows a small amount of motion. The presence of limited motion in a joint is often more harmful than good because it is more easily strained and injured by breaking up old adhesions. Such a joint is extremely painful. It is a matter of opinion which variety, the osseus or fibrous, is more satisfactory for arthroplastic measures.

The condition of the bone and musculature is an important factor in deciding upon mobilization measures. Bone atrophy or osteoporosis makes the operation difficult, especially in remodelling the bone ends. In some cases, where there is extreme bone decalcification, there is a definite contra-indication. The important muscles which control the joint must be carefully checked; the presence of scar or bound down muscles makes the outcome of the operation questionable. Atrophy of the muscles has a very important bearing on the case. If extreme atrophy exists, it is impossible to begin normal action early, which is a very important step in the after treatment of the operation. In long standing cases, this condition should be treated by massage and voluntary contraction of the muscles.

Age is a factor worthy of consideration in that the operation should not be done until epiphyseal growth has ceased. It is usually impossible to remove enough bone to secure motion without danger to the epiphyseal line. The age most preferable by leading authorities is between twenty and forty years.

The patient's general condition should be thoroughly gone over for possible foci of infection as there is danger of recurrence of an infectious process following operation. The general occupational and social status are vitally important in deciding upon mobilizing a stiff limb, which may be a great handicap to one person and may be only an inconvenience to another. The after treatment is long and painful, requiring the entire cooperation of the patient. Extreme shortening is a contra-indication to arthroplasty. Slight shortening may be compensated by a lift on the shoe.

The all important thing to the patient is the end result. In general, arthoplasty cannot restore a normal joint but in most cases it creates an articulation that is sat-

isfactory from the viewpoint of service. In order to fulfill the requirements of a good arthroplasty, the new joint has stability; it is strong; it adapts itself well to weight bearing, and the easy motion makes the limb a functional and serviceable member.

The fate of the fascia and its actual function in the joint is an interesting one which has not been definitely decided. Kirschner's opinion is that the flap must entirely disappear, otherwise it would hinder mobilization by the formation of adhesions. He believes that the flap forms fibrous tissue and adheres to the articular surface. Putti is of an entirely opposite opinion as reported in his experience on dogs. His idea is that the fascia maintains its original histologic properties. MacAusland believes that the flap is transformed into connective tissue and acts as a cover, which, under the influence of motion secretes a fluid which lubricates the surface.

ARTHROPLASTY OF THE ELBOW

An ankylosed elbow is more objectionable than a stiff joint any other place in the body. Most joints, even though ankylosed, when placed in good position, can function to a reasonable extent, but there is no satisfactory position for a stiff elbow. They are seldom, if ever, ankylosed in good position. In view of the great inconvenience of a stiff elbow, it is fortunate that it is the most satisfactory for arthroplasty. Previously mentioned indications and contra-indications must all be considered before operation.

TECHNIQUE

The arm is prepared from the tips of the fingers to the shoulder; the thigh on the opposite side is also prepared so it is possible for two operative teams to work simultaneously without interference. No tourniquet is used due to the danger of musculao-spiral nerve injury. The incision is made laterally, extending from well above the condyles down on the forearm. The skin is then covered with sterile stockinette which is rolled on and an opening just the size of the skin incision is made. The covering is sutured to the skin edge with linen to relieve all possible chance of contamination from the skin. The capsule is opened and all tissue removed from around the joint. The ulnar nerve is isolated and protected from injury. The head of the radius is removed and the entire joint opened by means of a curved or straight osteotome. We have found it unnecessary to sever the triceps tendon, as most authors do. The ulna and humerus are disarticulated and all chronic inflammatory tissue and excess bone are removed. The lower end of the humerus is rounded off, care being taken to clean out the olecranon notch. The end is then rounded with a rasp or file. The joint surfaces are made to fit well to prevent instability. We believe that, by the removal of the head of the radius, we eliminate future complications and often secondary operations. In our cases, there has been no evidence of instability as a result of it. The flap of fascia, large enough to cover the distal end of the humerus, has been removed in the meantime from the opposite thigh and is placed over the distal end of the humerus and held by purse string suture. The ulna is placed in position; the remains of the capsule are closed and the wound is closed in layers. The arm is placed in the usual splint, flexed at about 90 degrees with slight traction on the elbow.

AFTER TREATMENT

The after care is the most vital part of the arthroplasty. The patient is required to be under observation for a long period of time. After a week to ten days, if the wound is healed satisfactorily, passive motion is begun. The motion should never be forced, and especially in the presence of pain. Mild physical therapy, in the way of light massage and heat should be administered. In a month to six weeks, voluntary motion may be begun. The progress should be carefully checked, by radiographs, to determine the condition of the joint.

CASE REPORTS

Case I — L. R., female, age 20 years, with history of infectious arthritis of right elbow and knee with complete ankylosis.

Examination: Shows complete bony ankylosis of the elbow and knee; forearm in about 165 degrees of flexion and complete pronation with no motion, either in pronation or supination, flexion or extension.

Result: On January 16th, approximately six months following operation and a non-eventful recovery, the patient could bring arm into 148 degrees of extension and 36 degrees of flexion. There was 40

degrees of pronation and supination. Effort is still being made to increase this condition by physical therapy.

Case II— J. L. C., female, 20 years, history of infectious arthritis of left elbow with complete ankylosis.

Examination: Shows complete bony ankylosis of elbow in 160 degrees flexion; no motion in flexion, extension, pronation or supination.

Result: On January 20th, one year and two months following operation, arm could be brought to 150 degrees extension; 40 degrees flexion, and pronation and supination have a range of 60 degrees.

Case III—L. D., female, colored, age 22, with history of infectious arthritis.

Examination: Showed 10 to 15 degrees of motion with the arm in 165 to 170 degrees of flexion; forearm in supination.

Operated and arthroplasty done September 21, 1927.

Result: Examined in December, 1929, 2 years and 3 months following operation and found to have 105 degrees of motion and good stability.

CONCLUSIONS

In a short series of cases we have found arthroplasty of the elbow to be extremely advantageous in treatment of ankylosis of the elbow. It gives nearly normal range of painless motion and enough stability for moderate work.

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THE TREATMENT OF THE TRANSUDATES AND EXUDATES

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Just what conditions must be present in order to produce a transudate is not quite clear. There are probably several factors which separately or combined may cause it. Exudates, of course, are the result of the inflammatory reaction of serous membranes.

The disappearance of a transudate or edema is, according to Vasquez, accomplished in two stages. In the first stage there is a dimunition in the extent of the edema. The cyanosis or pallor is lessened, the extremities feel warmer and there is a general feeling of well being experienced by the patient. There is no loss of weight and no increase in the urinary output as yet. This period is of short duration and is spoken of as the stage of mobilization.

The processes operating at this stage are as little understood as the conditions which brought about the edema in the first place, but it is fairly certain that most of our diuretics have their action at this stage of mobilization in the periphery. especially is this true of salyrgan. The fluid in this first stage has not yet passed the renal barrier.

In the second stage, diuresis is established and is attended by a corresponding polychloruria. The quantity of urine reaches from two to four quarts and the chlorides from two hundred to three hundred grains or more in twenty-four hours. The edema disappears, the weight decreases and the functional disorders disappear. These are the favorable cases. In others the process is not so simple. In these cases, especially if the disappearance of the edema is rapid, there occurs a series of symptoms which may be of variable severity. They are especially apt to occur during the first stage, the period of mobilization or resorption. They consist of vertigo, headache, cardiac pain and general weakness. In the more serious forms there occurs rebellious insomnia, hallucinations, intense muscular pain and swelling of the joints much like that which follows the injection of specific sera.

Gouget has suggested that this syndrome is an anaphylactic reaction caused by the re-entry into the blood stream of the transudates. To support this it has been noticed that this syndrome has never occurred, when the serum, no matter what the quantity, is eliminated externally. Another important observation is that they occur before the diuresis. Abrami has shown that a general anaphylaxis can be provoked by injecting the patient with his own serum intravenously. The avoidance of this syndrome and the relief given to a weakened heart by the drainage of from two to five quarts of fluid are certainly sufficient indication for the use of needles such as the Kerschman.

This procedure of subcutaneous drainage is not new but it has been the practice to employ it when all other means of removing the edema had failed and the patient became so waterlogged that it seemed the skin would burst. It should be used early. The technique is simple and is as

follows: The patient should be in a comfortable chair with an elastic or roller bandage applied from the toes to the knees and the needles inserted into the thigh or trunk in the most edematous areas. No local anesthesia is needed, simply paint the skin with iodine and insert two to six needles. A rubber tube connected with the needles and leading to a receptacle have some siphonage action. The needles should be left in for about twelve hours. In that time, from two to five quarts of fluid can be removed. It is an interesting fact that if salyrgan is given after the needles have drained, the output of the fluid will be much increased, this giving further evidence that its action is in the periphery. This method, in addition to being very effective, will greatly lessen those unpleasant anaphylactic reactions sometimes encountered, aids a weakened heart and certainly does the kidneys no harm.

The effectiveness of salyrgan in removing fluid from the tissues and cavities is marked and is superior to that of any other drug now employed. Ammonia chloride in doses of twenty grains every four hours by mouth seems to enhance its effectiveness. Salyrgan is given either intravenously or intramuscularly though the intravenous route is preferable. One c.c. can be given for the first dose and if the tolerance is good it may be repeated every third day. It is common for the urinary output to be increased from less than one pint to from three to five quarts in twenty-four hours. Cases of severe colitis or hemorrhagic nephritis are extremely rare from the judicious use of this drug. Heart failure and nephritis do not contradict its use.

It is not necessary to know the cause of the edema in order to use salyrgan and it is equally effective in removing exudates. If it is known that an edema is caused by a nephrosis, urea is very safe and effective if given in high doses. From forty to eighty grains should be taken daily and it can be made palatable by mixing with strawberry jam. Always remember that in a nephrosis there is a low blood pressure and a high albumin and that syphilis is a frequent etiological factor. After the edema is gotten rid of, the albumin often disappears.

The myxedema of hypothyroidism is not in the nature of a transudate, but when encountered in the lower extremities only, may be somewhat confusing. It does not pit on pressure. The fluid is intracellular and not intercellular. Thyroid extract is of course the remedy of choice.

After a patient is relieved of an edema the cause can usually be accurately determined. Most of the cases we see are the result of right heart failure and these should be digitalized and then fluid and sodium chloride intake sharply reduced.

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SOME RECENT ADVANCES IN ALLERGY*

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Knowledge concerning allergy has been growing rapidly and the literature has increased proportionately, and since the recognition of unusual manifestations and management of patients exhibiting it are among the present day medical problems, it is desirable that we should from time to time take stock of the data that have been accumulated and of the inferences that have been drawn from them. However, I dare say that a compilation of our experiences will convince us that, though we already know a great deal regarding the common allergic states, our ignorance of the subject is still more impressive than our knowledge as evidenced by the constantly increasing reports of manifestations in other diseases, explicable only on an allergic basis.

Since the report of the first case of hay-fever more than a half century ago, modern immunology has been characterized by recurring waves of clinical hope and clinical disappointment. The term "allergic diseases" was applied to a limited group of clinical entities presenting four types of symptom complexes, namely, hay-fever, bronchial asthma, eczema, and urticaria and angioneurotic oedema. With the exception of hay-fever, the overwhelming disappointment in treatment of the other allergic states has served one useful purpose. It has given impetus to the meagre research in allergy started in the early seventies of the past century and has carried those workers into, and stimulated those in, other fields of medicine. I refer

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particularly to the recent study of infectuous diseases, showing the relationship between allergy and tuberculosis, scarlet fever, acute rheumatic fever[3], and acute diffuse glomerular nephritis.[2,3,4] Time will not permit a description of the train of events which has resulted in an elucidation of many of the problems in allergy and I shall only hint at some of the outstanding achievements during the past few years.

SEASONAL HAY-FEVER

Pollen is probably the most common single cause of sensitiveness in human beings. That the pollen concentration varies in different parts of our country we are all aware. The marked relief noted by patients in traveling to high altitudes and the incessant symptoms of hay-fever experienced by them while traveling through certain sections of the country is evidence that the atmospheric conditions are very variable. Durham[5] and co-workers made a pollen survey last year which resulted in some very interesting statistics with regards to the pollen (rag-weed) concentration in many American cities. The following is an account of the average daily pollen concentration in numbers of pollen per cubic yard of air: Phoenix, Ariz., 0.1; Philadelphia, 15.0; New York, 50.0; Fort Worth, Texas, 83.0; Chicago, 115.0; Memphis, Tenn., 220.0; Kansas City, Mo., 360.0; Indianapolis, Ind., 470; Ann Arbor, Mich, 590.0; Oklahoma City, Okla., 814.0. Although a comparative study of the results obtained in the treatment of ragweed hay-fever in the above mentioned cities is not available, satisfactory results are more difficultly obtained in this state than in those in which the pollen concentration is small.

One outstanding achievement in pollen study is the preparation of, and the use of, pollen suspensions by Murphy[6]. The preparation received by the physician in general practice from the pharmaceutical firms and those prepared by the laboratories for those who give hay-fever especial attention are merely extracts of the pollen. Because of the difficulty in completely extracting pollen, as evidenced by the fact that repeated extracting solutions give positive skin reaction in sensitive patients, Murphy prepared a fine suspension of pollen, the individual particles of which were no larger than bacteria. An absorption study in laboratory animals showed complete absorption when the suspension was injected both intra- and subcutaneous. Clinical use of this suspension is in progress. The method is indeed sound and should prove a more effective method of treatment than has been obtained by the use of extracts.

BRONCHIAL ASTHMA

The multiplicity of factors precipitating attacks of bronchial asthma emphasizes the necessity of a thorough search for the stimuli. In an analysis of twenty-five cases of bronchial asthma, Baldwin[7] concluded that the stimuli leading to the initial attack could be narrowed into two classes: (1) An infection involving the respiratory tract; (2) specific protein sensitization. However, an analysis of the stimuli leading to subsequent attacks revealed the fact that they could be divided into one or more of three groups: (1) Specific protein stimuli; (2) infections involving the respiratory tract; (3) non-specific excitants including the heterogeneous group of atmospheric conditions, emotional and psychic factors, exertion and irritants.

Some of the unusual stimuli referred to above as causes of asthma are as follows: Kapok, parasites, sandflies, and, a less uncommon offender, house dust.

Cooke[8] was the first to emphasize the importance of house dust as a cause of bronchial asthma. By using varying extracting solutions he was able to isolate a substance which he believed to be the causative factor in 109 patients. He could not ascertain the exact nature of this substance. During the past few years the report of many investigators of isolation of fungi in house dust, the finding of fungi in the sputum of some cases, suggests that the fungi may be the cause of asthma in those whose attacks are precipitated by association with house dust. Furthermore, skin sensitivity to extracts of these fungi is more evidence that the latter are the etiological factors in these cases. Sufficient data have been collected to warrant culturing house dust with Sabouraud's media in this group of asthmatics.

Brown[9] has emphasized the importance of testing each patient for kapok before substituting a pillow containing kapok for the usual feather pillow in cases of "feather" asthma.

A case of coryza and asthma due to

sandflies was reported by Parlato[10]. He found that a buffered saline extract of the flies produced a positive skin and opthalmic test. A positive passive transfer was demonstrated with the patient's serum, and hypodermic injections of the extracts resulted in a state of hyposensitiveness in the patient as evidenced by diminution of skin reactivity, absence of eye reaction and freedom of the usual symptoms.

A very interesting case of bronchial asthma was observed by Sternberg[11]. A colored man age 37 years had suffered seasonal asthma for twelve years. The attacks usually began in the second week in July and lasted until the end of September. The history suggested pollen asthma. However, all tests to the pollen, inhalants and foods were negative. The patient felt well when away from home, but at night when in his own bed an attack of asthma would develop in a few hours. When he slept out of doors in his back yard, there was marked improvement. A survey of his home resulted in finding his bed infested with bed-bugs. An extract of bed-bugs was made. Skin tests on controls were all negative, but the negro gave a marked skin reaction and a complete cure resulted in the eradication of the bed bugs.

ECZEMA AND URTICARIA

Not infrequently it is almost impossible to do satisfactory skin tests on patients suffering with eczema. The pathological state of the skin makes interpretation of skin tests very difficult. Furthermore, non-reactors are not infrequently seen. These difficulties lead Rowe[12] to outline test diets which are proving to be helpful in determining the cause of some allergic manifestations. It should be emphasized that strict adherence to these diets are necessary and that no detail can be neglected. For example, Duke[13] observed one case who was sensitive to pork. The patient's symptoms persisted in spite of the fact that he was not eating ham, pork, or bacon. The patient had neglected one detail, namely, the elimination of lard in cooking. When the latter was effected, subsidence of symptoms resulted.

Patients presenting themselves with seasonal eczema should be looked upon as probable pollen allergy cases. Rag-weed may cause skin manifestations in the form of a dermatitis as well as seasonal hay-fever and asthma. It is important to note that skin reactions are not obtained by the method commonly employed in determining skin sensitivity. In this group of cases the test is made by the method used in determining rhus toxicodendron sensitivity. A small piece of blotting paper is saturated with a solution of pollen extract and direct application to the skin is maintained for a variable length of time, usually from six to twenty-four hours. Desensitization in pollen dermatitis is often successful, but Sutton[14] advocates the use of very small doses of extract administered intracutaneously rather than the usual subcutaneous injection.

ANGIONEUROTIC OEDEMA

Very little light has been shed upon this uncommon condition. The rarity of this disease is seen by the report of Osler[15]. He saw only 16 cases in over 23,000 admissions to the John Hopkins Hospital in twenty years. The fairly common association of Quinke's oedema with such conditions as urticaria and hay-fever suggests that in some instances there may be a connection between this disease and a state of hypersensitiveness to some foreign protein. Undoubtedly angioneurotic oedema may occur in individuals who have a hypersusceptibility; but the history and the cutaneous reactions in patients with angioneurotic oedma seem rarely to furnish any evidence of hypersensitiveness, and in the few patients who respond to foreign proteins, it is not certain that their attacks follow contact with or ingestion of the proteins to which they are found hypersensitive. Rarely a definite history of contact is elicited. I refer particularly to a case of Thomas and Gay[16] which I had an opportunity to observe. A middle aged man, who, by virtue of his work, came in frequent contact with fish. Three months prior to the onset of oedema, which involved the left face, eyelids and scrotum, he had an attack of influenza. The examination revealed an infection of an antrum, drainage of which resulted in a concomitant disappearance of the oedema. Skin tests were positive to fish and several of the common organisms found in the nose and throat. The former certainly played no part in the etiology of the oedema, because he remained at work asymptomatic. There remains one conclusion in this case, namely, that a sinus infection associated with a pyogenic organism initiated the attack of angioneurotic oedema.

HENOCH'S PURPURA

It is of interest to note that in 1914, the year of Osler's last publication on Henoch's purpura, allergy as a clinical entity was just coming to be appreciated. Osler remarked in that article that anaphylaxis was the key that would would open the door to this mystery. However, it was not until thirteen years later that the correctness of this suggestion was proven. It has been suggested from time to time that purpura is an allergic phenomenon, but no convincing facts were advanced to substantiate this contention. The one demonstration that has linked purpura with allergy is its occasional occurrence with serum sickness, which is a condition of hypersensitiveness resembling allergy. Alexander's[17] important observations have proved that certain food substances may cause purpura of the type described by Henoch, characterized by purpura, bleeding from the mucous membranes associated with abdominal pain. He has reported nine cases, six of which were undoubtedly due to food as evidenced by a subsidence of the lesions following abstainance of the causative factors and appearance of purpura and development of abdominal pain by having the patient ingest the suspected food. The following is a report in abstract of two of his cases:

Case I—A boy, age 14, first observed in 1928; had suffered from hay-fever the two preceding summers. There was an indefinite family history of allergy, but no history of associated allergic manifestations. Skin tests were positive only to the pollen that caused his hay-fever. During treatment of his hay-fever he developed an attack of severe abdominal pain which was followed shortly by large purpuric spots on the back. A history revealed that, just preceding these symptoms, the boy had eaten a considerable quantity of red plums. After his recovery he was given red plums to eat and within a few hours the sequence of abdominal pain followed by purpuric spots was produced.

Case II—A woman, age 52, first seen in 1928, complained of abdominal pain, blue spots and painful joints, particularly of the knees, wrists and hips; these were moderately swollen but not red. There was an indefinite family history of allergy and no history of associated allergic manifestations. The patient believed that her abdominal pain came after eating apples in any form. Skin tests were negative. It was found, however, that pork, onions and strawberries caused her symptoms. She remained well while avoiding these foods. After only a small portion of pork had been taken, severe abdominal pain occurred within three hours and purpura within twelve hours. These symptoms were also produced by onions and strawberries. No joint disturbances were thus produced.

Barthelme[18] has recently reported a case, unquestionably due to wheat, tomatoes, beef and egg yolk. A diet free of these foods resulted in an asymptomatic state in three days and disappearance of purpuric spots in a few days. After two weeks on this diet, the patient ate homemade ice cream containing egg. The following day abdominal cramping and purpuric spots were noted. Deliberate feeding of wheat gave rise to purpuric spots, and muscle and joint pains. Ingestion of egg yolk resulted in purpuric spots and abdominal pain.

ACRODYNIA (ERYTHREDEMA)

This infantile and juvenile clinical syndrome characterized by coldness of hands and feet, cyanosis, oedema, desquamation, inanition, insomnia, paresthesias, areflexia, paresis, loss of hair and teeth was described by Swift[19] in 1914.

Since that time much speculation on its etiology has been made including the following: (1) Post-influenzal sequela, (2) upper respiratory infections, (3) avitaminosis. That the onset of the symptoms are from one to several months following the acute infections is evidence against an infectuous etiology. In many cases the diet is a well balanced one and one in which no change has been made. This fact does not support the avitaminosis theory.

In an analysis of the report by Warthin[20] of two autopsies made on cases of "acrodynia," there evolves evidence pointing toward an allergic etiology. His cases showed congestion and oedema of the central nervous system (hydromyelia in one case), acute catarrhal gastroenteritis, hyperplasia and hyperkeratosis of the epidermis, marked capillary dilation of the cutaneous vessels, and hypoplasia of the lymphatic system and suprarenal medulla.

Helwick[21] has noted the similarity of the skin changes in acrodynia and allergic cases. Furthermore, the chest findings

and catarrhal gastroenteritis are similar to those found in foreign protein sensitive individuals.

Sufficient evidence has been presented to warrant a study of future cases with the probable allergic etiology in mind.

ALLERGIC ABDOMINAL PAIN

Rowe[22] has made the statement that gastrointestinal symptoms are due to food allergy more frequently than is appreciated by the profession, and it becomes necessary for such allergy to be taken into account in the study of all patients with gastroinestinal complaints. In many of his cases the symptoms of organic disturbance, such as peptic ulcer and cholecystitis, were simulated and no less than 24 per cent of abdominal allergy patients had had abdominal operations because of their symptoms, the relief of which was effected by the elimination of the causative food to which they had been found sensitive. This one observer in addition to the observations of abdominal allergic manifestations by Duke[23], and Balyeat[24] and others, emphasizes the necessity of inquiring into the history of patients with suspected appendicitis, peptic ulcers, colitis, diarrheas and unexplained abdominal distress, with regards to possible associated allergic entities, such as hay-fever, bronchial asthma, eczema, urticaria and food idiosyncrasies.

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VITAMINS

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VINITA

The first knowledge of a vitamin deficiency disease extends back to the time of sailing vessels, when sailors, deprived of fresh fruits and vegetables for long periods of time, developed scurvy. It was discovered as early as 1747, that scurvy could be prevented and cured by feeding orange and lemon juice. The British navy was more especially afflicted with scurvy while the Japanese navy was afflicted with beri-beri. It was not until about 1885, that the Japanese brought beri-beri under control by substituting barley for a part of the polished rice which was then the principal food of the sailors. The grandmothers of generations ago knew that cod-liver oil would help make a strong, healthy baby and that it was considered a good treatment for ricketts. The first experimental work which eventually led to the vitamin theory was done in 1881, by Lumin. He states that he fed purified foods to animals that failed to grow until the addition of a small amount of milk in the diet caused the resumption of normal growth. The next work of interest was done by Eijkmann in 1897, when he produced avian beri-beri by feeding polished rice to chickens. He was able to cure this by feeding an aqueous extract of rice polishings. Another great step was taken when Goldberger advanced the theory that pellagra was a deficiency disease. He demonstrated that it was due to the deficiency of the B2 factor which at that time was still considered a part of vitamin B, and he was able to produce the disease at

will by the ommission of this factor from the food. His treatment of supplying large quantities of this vitamin in the food is practically the only successful treatment of pellagra that we have today.

Observations on the feeding of vitamins are now being made along two new lines, *viz.*, cancer and puerperal sepsis. If early observations are confirmed there is a great possibility that these conditions may be prevented or even treated by means of the diet.

Altered living condition, made necessary by the march of civilization, are responsible for most of the deficiency diseases. Living conditions in the United States today are better probably, than in any other part of the world, yet the use of prepared and highly refined foods may be the reason why the United States leads in the maternal mortality rate.

The British Medical Journal reports a series of puerperal septicemia cases treated with very large doses of vitamin A. Of the twenty-nine cases reported, five received the treatment and twenty-four did not. Twenty-two of the twenty-four died while all of the ones receiving the treatment recovered. Other cases were treated with seemingly good results but owing to the fact that the blood cultures were negative they were not reported. The treated cases showed a gradual improvement, causing the observers to believe that the vitamin acted by building up the resistance and not as an antitoxin. They are now running a series of cases in which large doses of vitamin A are given to the patient two weeks before the expected confinement and continued through the puerperium.

When guinea pigs are placed on a diet lacking in vitamin A, pulmonary infection occurs, differing from the ordinary infective pneumonia found in the guinea pig. This infection occurs in the lobe of the lung not present in man. A certain percentage recover from this pneumonia and cancer frequently follows in the site of the infection. Implanation tumors in mice can also be influenced by varying the vitamin content of the food. The absence of vitamin A seems to inhibit the growth of implanted tumors and to reduce the percentage of takes. Observers conclude that vitamin A is necessary for the growth of cancer cells as well as for normal tissue cells.

Vitamin A is necessary for the formation of nuclear tissue while vitamin B is necessary for the proper nutrition of nuclear tissue. Thus both are necessary for the production and growth of cells, whether these cells are normal or pathological.

Some work has been done on the relation of vitamins to hormones. Many points of similarity have been found. Some hormones, such as insulin, folliculine, and ovo-insulin may be obtained from both plant and animal substances. It is noteworthy that these substances are also rich in vitamins. Vitamins and hormones are present in nature side by side; the pancreas from which we obtain insulin is also very rich in vitamins; likewise some of the plants from which we obtain vitamins are rich in the female sexual hormones. The anti-sterility vitamin E is closely related to the female sexual hormones in that they are dependent upon each other. Some hormones may be activated by radium while some vitamins may be activated by ultraviolet rays. Pigeons in the last stages of beri-beri may be saved by repeated injections of insulin, while the excretion of sugar in diabetics may be stopped by the administration of extracts of beets and yeast. Vogt believes that the extracts of yeast is perhaps a previous stage of insulin and that the diabetis is due to the lack of this stage in the food. He also believes that pellagra is curable with insulin.

VITAMIN A

Vitamin A is fat soluble and can therefore be dissolved in ether and other fat solvents. It is found in that portion of the fat that does not saponify. It is moderately stable to heat when not exposed to oxidation but is readily destroyed by heat plus oxidation. The original source of vitamin A seemed to be sunshine as it is found in all green colored vegetables where it is held in combination with chlorophyl. In this state it is very resistent to fat solvents but when it is acted upon by the digestive juices it is readily taken up by the system and fat solvents. Animals cannot manufacture it, therefore, the amount in milk, butter, egg yolk, liver, spleen pancreas and other animal products is variable though usually rich, depending on the food of the animal. Purified vitamin A, called biosterin, isolated from codliver oil is photoactive as is also vitamin D. Most, if not all vitamins, are thought to have a particular place in the spectrum. Some

workers attempt to determine the amount of vitamins present by the absorption of the spectrum. It has been found that sunlight and other forms of radiant energy may delay somewhat the onset of symptoms but is of no real value in the treatment or prevention of diseases due to the deficiency of vitamin A.

Vitamin A is essential for growth because it is necessary for the formation of nuclear tissue. It has other functions, however, in that animals deprived of it are less resistent to infections of all kinds. The respiratory tract, the intestinal tract and the eyes being more affected by its absence than the other organs. Glandular epithelium is also markedly affected. In fact, xerophthalmia starts with a dry cornea due to the degeneration of the lachrymal gland. Nyctalopia and hemeralopia are also related to vitamin A deficiency. Urinary calculi have been reported several times in relation to its deficiency, especially when connected with an over supply of vitamin D.

VITAMIN B

"Within the past few years, evidence has accumulated to show that the old vitamin B is really a complex consisting of at least two and possibly more factors. As a result, vitamin workers have given scientific recognition to two factors. The first one which cures beri-beri, promotes lactation and is heat labile is now called viatmin B by the American workers and vitamin B1 by the British workers. The second factor of the old vitamin B complex which promotes appetite, cures pellagra and is thermostable, is now called vitamin G by the American workers and vitamin B2 by the British workers."

Goldberger has also designated this last factor as the P P or pellagra preventive vitamin. Both factors are water and water alcohol soluble. Because most of the information at hand is on the complex, both factors will be discussed at this time. Much of the work on this vitamin will necessarily have to be done over.

McCarrison is authority for the statement that vitamin B stimulates nuclear nutrition and suggests the term "nucleopast" to emphasize this fact. When the vitamin B complex is omitted from the diet, growth and appetite fail and loss of weight follows. Death may occur with or without polyneuritic symptoms. When the deficiency is not marked usually the animals are anemic, constipated, weak and listless. There is a tendency for all vital organs of the body to atrophy except the supra-renals which have the tendency to hypertrophy.

The B1 factor may be obtained from yeast, whole grain, vegetables, egg yolk, fruits, leafy vegetables and milk. The B2 or P P factor, so essential in the treatment of pellagra, is found in beef muscle, liver, salmon, egg yolk, yeast and tomatoes, though in relatively small amounts in the latter. It is more abundant in yeast than in any of the substances mentioned above.

One thing that possibly needs emphasis is the method of cooking vegetables. Vitamin B being soluble in water is dissolved in the cooking water and may be thrown away if care is not used to prevent such. Over cooking should also be avoided.

VITAMIN C

The lack of vitamin C not only produces scurvy but leads to many related atypical states of ill health, such as loss of weight, hemorrhage of the skin and joints, diseases of the gums, etc. In other words, a general run down condition with some of the symptoms of scurvy present although not enough to make a definite diagnosis. The scurvy of infants is considered by some as one of the atypical conditions. Vitamin C is also necessary for the proper development of the teeth. Its deficiency in the food of the mother will lead to malformations, absence of enamel and early decay of the teeth in the young. "The slogan that a clean tooth never decays is false, for the fate of a tooth is largely determined before eruption. During uterine life and soon after birth, the enamel of the tooth is developed, and at this time the integrity of the membrane and the character of the future tooth is determined in part by the vitamin content of the mother's food" "There is a marked difference in the character of the teeth both as to form and integrity, in the white and colored children of the South, the difference being greatly in favor of the colored children, in spite of their lack of knowledge of the tooth brush. The difference lies, it is thought, in the fact that the negro mother nurses her child longer and more universally than does the white mother and that she eats more rough vitamin-containing foods."

Vitamin C is found in limes, lemons, grapefruit, oranges and tomatoes. It is found also, though not in such large quantities, in carrots, lettuce, spinach, cabbage, apples, strawberries, raspberries, etc. The vitamin content of milk and eggs is variable according to the food of the animal. It is easily destroyed by heat plus oxidation but withstands heat alone fairly well. The tomato, probably because of its acidity, is an exception to this, the canned tomato being nearly as rich in vitamins as the fresh. In milk, vitamin C is particularly suspectible to heat plus oxidation. It is said that unsweetened condensed milk loses most of its vitamins, while the sweetened kind retains a fair quantity. Dried milk properly made by the spray process also retains some of its antiscorbutic properties.

VITAMIN D

Vitamin D is the antirachitic factor which plays a part in controlling the calcium-phosphorous equilibrium and deposition. The most common symptom of vitamin D deficiency is softness of the bones and teeth. It has been shown from experiments on dogs that foods rich in vitamin D, especially codliver oil, irradiated olive oil irradiated ergosterol, help to produce normal dentine, while diets poor in this factor tend to produce hypoplastic dentine. It has also been shown that secondary normal dentine may be initiated in a tooth which had originally hypoplastic dentine and in which caries had already started, by the simple means of adding to the diet some substance rich in vitamin D.

Vitamiu D, like vitamin A, originates from sunshine and is photoactive. It is activated by exposing the phytosterol of plants and the cholestrol in animal cells to solar rays either natural or artificial. Exposing the body to the ultraviolet light activates the cholesterol in the cells of the skin. From here it is absorbed into the blood stream. Ergosterol is readily activated by exposure to ultraviolet light but too long an exposure tends to destroy vitamin D. Irradiated ergosterol being many times stronger in vitamin D than any known substance, and sufficiently concentrated that extremely large doses may be given, the question of over dosage has arisen. Those investigating this phase of the subject found that (1) extremely large doses of irradiated ergosterol must be given daily to produce any ill effects. (2) "Doses as high as 10,000 times the daily curative dose over a period of six months have no effects on the growth of white rats, and no apparent effects on their body functions. (3) "Excessive amounts of vitamin D cause a drainage of mineral constituents from the body with a relatively greater elimination of phosphorus than calcium." (4) "Dosages of 100,000 times the daily curative dose produce anorexia, emaciation, greasy hair, labored breathing, and eventually death." The pathology present in these animals was quite alarming but due to the fact that a dose of 10,000 times the daily curative dose did not produce any symptoms, the margin of safety seems to be quite large. It has been found that toxins may be present in irradiated ergosterol due to impurities present before irradiation. Irradiated alcohol produces a very toxic substance. Several preparations of ergosterol have been taken off the market due to the discovery of these toxic substances.

Ricketts is a disease of the temperate climates. It is not found in the tropics because of abundant sunshine and a climate suitable for the exposure of the body to that sunshine. It is not found in the arctic regions because of the large amount of fish in the diet. The vitamins so abundant in fish originate in the algae and other plant life upon which the fish feed. The larger fish obtain their supply by devouring the smaller fish.

Codliver oil is very rich in vitamin D, containing from 100 to 250 times as much as butter. Vitamin D is found also in fresh raw carrots, alfalfa, eggs and milk products. The amount in the latter two being somewhat variable. As mentioned before, the treatment of ricketts must include a suitable supply of phosphorous and calcium in the diet. However, the only constant factor present in ricketts is the deficiency of vitamin D.

VITAMIN E

Comparatively little is known about vitamin E. It resembles the ovarian hormones in that the effects of the two substances are similar and are somewhat dependent upon each other. Mice fed on a diet containing vitamins A, B, C, and D and balanced in other respects except for the absence of vitamin E, will mature in a normal manner but will not be capable of reproduction. If conception takes place

the fetus is absorbed before maturity. McCollum thinks that the death of the fetus is due to a "crisis in iron assimilation" as the presence of vitamin E is necessary for the proper assimilation of iron. Primary anemia may be a deficiency disease as it responds to liver therapy. The liver being rich in both iron and vitamin E not only furnishes the iron but the vitamin necessary for its assimilation. Vitamin E is contained in lettuce, cereals, fresh meat and egg yolks.

Deficiency diseases are present in man and of course, need treating, but by far the greatest problem is the selection of a diet sufficiently varied and balanced to prevent a lowered resistance and susceptibility to disease. Sufficient vitamins to maintain health can be obtained from milk, milk products, eggs, vegetables and fruits.

It has been said that enthusiasm, when stabilized with common sense, invariably leads to progress. When not properly controlled however, it may impede progress. The study of vitamins is being carried on with enthusiasm and many workers are conservative while others are not. This branch of study is comparatively new, as it has been only in the past few years that controlled animal experiments have been done. Much valuable information has been secured and investigations are being done on a strictly scientific basis. In time, the groundless claims of the enthusiast will be disproven and the useful information will be correlated and put to practical use.

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THIS SINUS "THING"*

A. M. McMAHAN, M.D.
DUNCAN

In reading a paper before a medical society it seems usually to be the idea of the writer to impress his listeners with his own importance and wisdom. And since for the past couple of years many of the "higher-ups" have had the the habit of referring to any subject or phase of a subject as a "thing" I have decided to use the word here in *my* subject. The purpose of course, being to impress my superiority upon my listeners. Another reason for using the expression is *that* word gives me a clear field to say anything I want to without getting off the subject. And before I am finished you will discover that I am making no effort to stick close to my subject.

I shall differ with the big men in the profession, however, by avoiding large word, technical discussions, etc., it is, of course true that the deeper and more mysterious a doctor becomes in his discourse the shrewder his fellow physicians consider him. I could go into fine detail about how to do a Caldwell-Luc operation, or a Killian, quote all the big men of Vienna, discuss the objections that have been raised against the operations and in the end you gentlemen would go home not one whit better off regarding what to do with your sinus cases as they come to your office. Therefore this will not be such a scientific treatise as is customary, but if you do not get a point or two which will be useful to you at home, I will be disappointed. I am handling this subject for the benefit of the general practitioner.

"How do you treat sinus trouble, doctor? Do you operate?" "Yes, sometimes." "Do you wash them out?" "Yes, sometimes." "Do you shrink the tissues in the nose and use suction?" "Yes, usually" "Or do you always just shrink the tissues and let it go at that?" "Well, yes, I always shrink, but do not always let it go at that." "Well, when do you use these different things, or what leads you do one thing one time and another at another time?" "Now you are talking more sense. Your diagno-

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sis, and duration of the trouble governs this almost entirely. I say *almost* entirely —it should be entirely, but the patient will not always stand for what ought to be done."

There are three stages in most sinus infections that should be recognized and treated accordingly: (1) The acute inflammatory stage, (2) The pus stage, and (3) The stage of necrosis. Another point to be considered here and which helps to determine what to do is what sinus you are dealing with?

I want to briefly consider and get out of the way the intranasal sinuses consisting of the anterior and posterior ethmoids and the sphenoid. The ethmoids are very frequently troublesome in children and should not be neglected as they usually are. Early in the game with these little patients, if you will keep the nose clean and draining freely, by suction if need be, they will clear up very readily, but if you cannot keep them from catching fresh colds as you go along, your job will be prolonged. In fact the parents will usually tell you that they seem to catch colds easily. This is natural as ethmoid infection makes it easy for colds to get a hold and colds are sure to make a smoldering ethmoid infection flare up. In grown-ups similar treatment may suffice early in the attack, but when the infection has become chronic you are just about up against an exenteration of ethmoid cells. Try first, of course, to clear them up by shrinking and some suction.

Now for the frontal and maxillary sinuses. You may operate your frontal sinuses if you want to, *but you are not going to operate my frontal sinuses and I don't mean maybe.* I think some of the most pitiable humans I have ever seen were those who had had frontal sinus operations, maybe repeatedly, and still they had their pain by spells just as fierce as it ever had been before. Look up into their nose and you will see a large, roomy cavern, very little normal structure, nothing left to treat and probably nothing left to operate upon. What the thunder can you do for a person like that? About all you can do is to give them a hypo in the arm and hope that they will not talk about you later like they are talking about their previous surgeons. Various and sundry operations have been used on the frontal sinus and some are used yet, but fortunately we are operating far less on the frontal sinus in the United States than we were twenty years ago. Favorite procedures have been to burr up into the sinus along the duct from the sinus or remove the floor of the sinus by some such operation as Good's. Such procedures as these left a fine large hole into the sinus through which pus could escape, but also left a fine large hole for stuff to escape from the rest of the world into the sinus. Then later the darn hole would close up with scar or granulation tissue and the devil was to pay. Last summer I talked with a doctor from Indiana who had had an operation for something in the nose, he did not know what, the operation being done by one of the best rhinologists in Chicago. His trouble was not relieved. If anything, it was worse. He later consulted a good rhinologist in St. Louis and was told by this gentleman that he had had a hell of a bum operation. So there you are. It is easy to do a beautiful operation in the nose, but it may be another thing to obtain the relief that you are after. I get up in my little shop, known as an office, and study these things over, treat them as I go along, watch the results, compare them with more radical procedures and have about come to the conclusion that the less surgery done in the nose the better, unless you need the money more than I hope I shall ever need it. There are indications for surgery in the nose of course. But why are we likely to get into trouble with our surgery in the nose? And when I say we, I mean all of us including the leading rhinologists of the land. We get into trouble because practically every structure within the nose has a very vital function to perform, and when we go in there and cut into it or cut out a part or all of it some functioning of the nose is gone forever; and I might say here that the nose is not a mere ornament, but has more direct bearing on the health of the rest of the body than any other organ I know of. I believe that any operation on the nose that does not relieve the condition that was to be relieved, or if it relieves this condition but leaves in its stead some other condition that gives as much trouble as the original condition, this, then, is a bad operation.

Now get this point gentlemen: if an acute attack of frontal sinusitis were to hit me I would use ephedrin freely in the

nose to shrink the tissues and promote drainage, and resort to any other measurres that would put me in the best possible condition generally. After a day or two, or a few days, if I were not getting some results in clearing up the condition, and especially if I thought pus was forming, I would go ahead using the ephedrin and in addition use suction. From here on out, regardless of what happened, I would go mighty slow about resorting to more radical measures. Likely, I would not have to.

Now, if you will pardon the interlude here, there is another frontal sinus condition that I want to mention that bobs up ever now and then. This is frontal sinus vacuum headache. Usually the patient comes in suffering fierce pain with what he or she is likely to call "sun-pains". Symptoms for the most part are identical with those of frontal sinusitis. Severe pain on one side over the eye, usually coming on about mid-forenoon and easing away towards evening. Extreme tenderness on pressure upon the floor of the sinus back of the supra orbital ridge, pain exaggerated upon stooping or reading. How do you differentiate between this condition then and infection of the sinus? Transilluminate. Probably your X-ray will tell you this also, but I rely upon my transillumination almost entirely for my diagnosis. Transillumination is not infallible, of course, but I miss them very rarely by this method connected with other symptoms and history. Now when you transilluminate an infected sinus, your sinus area is dark. Compare it with the other side. When you transilluminate a frontal sinus vacuum, this sinus is just as clear as the other side. Remember also that the sinusitis pain does not disappear during the night. Now, I know some men, Dr. Dixon, formerly of Oklahoma City, for instance, claims that all of this is due to a maxillary sinus vacuum and not a frontal. I can't see it that way. Anyway, what difference does it make? In either case you shrink your tissues at the entrance of these ducts into the nose, and they both enter at practically the same point, and then you force air into the sinus, probably into both sinuses at the same time. It doesn't hurt the well sinus and presto, the pain is gone in the sick sinus. In March, 1925, one of our good doctors sent a little lady to me with frontal sinus vacuum headache. Upon shrinking the tistues in the nose at the point of entrance of the duct from the sinus and forcing the air into the sinus to relieve the vacuum, the pain stopped instantly. No more pain until April, 1927, two years later, when she came in again with the same trouble. Treatment the same and pain stopped immediately. In May of the same year nearly two months later, she came back with the same trouble. Treatment repeated and relief resulted, but later on the same day the pain came back and so did she. This time relief was complete and she did not return for just one year. This time one treatment was sufficient to give instant relief which stayed put. That was in April, 1928, and no more trouble occurred until January of this year. Relief was prompt, but did not stay put, so two days later we treated it the same way again. Relief was prompt, but again it recurred so three days later I fractured the midle turbinate and pushed it over toward the septum and thereby exposed the duct more freely. This enabled her to use the ephedrin more effectively at home. Air forced into the sinus gave fair results, but I had her return the following day, even though she was not suffering to speak of. I forced more air into the sinus and a couple of weeks later she called me and stated that she had had no more pain since she last saw me. This is just one of those cases where you have to use your horse sense along with science to get your results. And you can't always outline this on paper ahead of time for there is always some little unexpected something turning up to spoil your beautiful little theoretical air castle.

Now, for the maxillary sinus trouble. Here again we have the stages of inflammation, pus and necrosis. Necrosis is more prevalent with the maxillary sinus than with the frontal sinus. This is a fortunate fact, as we can do more radical operative work on the maxillary sinus with less danger of so much trouble resulting later. I rely here on my transillumination again for diagnosis. I recall missing a diagnosis in one of these cases a few years ago, when my transillumination showed a very dark maxillary sinus. I was not fully satisfied with my diagnosis in this case even to begin with, and a few days later I was sure I had a malignant growth within the sinus to deal with and later this proved to be correct. Early in the game we resort to our ephedrin in the nose for shrinkage, just as in frontal sinus infection, and do not wash them out. After a few days, especially if we feel that there is pus in the

sinus, we resort to our suction. Right here now is where the "big boys" will blow up and ask what I mean by using suction on a maxillary sinus. Well, I find often that we get nice results, although such treatment here is not as ideal as with the frontal. The reason is simply one of anatomy. In the frontal sinus we have our duct escaping from the sinus right from the bottom of the cavity and the pus which naturally fills the bottom of the sinus is easily sucked out. In the case of the maxillary sinus the duct leaves the sinus from near the top of the cavity and since the pus is naturally in the bottom of the cavity air occupies the upper part of the space and therefore the pus is not so easily sucked out. Having the patient lie down for awhile in the proper position would help in removing the pus by suction. However, if we do not get the results by this method soon we had as well resort to washing the sinus out by means of the needle or trocar passed through the paper-like external wall of the nose beneath the inferior turbinate. This is not a serious procedure, but it is not always easy to convince the patient of this, especially society women. Washing out the sinus is not a sure cure for sinus trouble. It will clear up most of your pus cases, but not all of them even. I saw a man one time who had been washed out this way two or three times a week for many months and still he was plenty bad off. A window communication from his sinus into his nose beneath the inferior turbinate was decidedly indicated in his case. Now, we sometimes run onto people who have had maxillary sinus trouble for so long a time that there is a great deal of necrosis of the walls of the sinus and necrotic material practically fills the cavity. An operation here by any method deemed best is the only treatment. Anything short of this is "monkey" business.

Now, men, in summing up: Don't operate your frontal sinus cases except in extremely rare cases. Shrink for the first day or two and shrinking and suction after the first few days. With the maxillary sinus shrink the first few days, use shrinkages and suction after the first few days and if no results, wash out the sinus a few times. In case of chronic sinusitis use the suction in case of the frontal, and in case of the maxilliary use washing if suction does not suffice. If you cannot clear up the chronic maxillary by washing then consider your surgery such as Caldwell-Luc. But if you see your case early shrinkage and suction will get most of them. Very frankly speaking, I would say to the general practitioner that you are safe in using the ephedrin for a few days but after that if you are not getting anywhere, you may be losing valuable time and paving the way for a chronic infection if you continue to treat in this way.

THE LABORATORY AS AN AID IN THE DIAGNOSIS OF SYPHILIS*

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The laboratory diagnosis of syphilis depends upon the demonstration of the spirillum, (treponema pallida) the presence of its antibodies or the cutaneous allergy. The method used in making the diagnosis is influenced by the stage of the disease.

An early diagnosis is to be preferred. First, because the earlier the diagnosis is made the earlier the treatment may be begun. Thereby saving the patient the pain and the inconvenience of a sore throat, skin eruption and other secondary manifestations. Second, because a more thorough eradication of the disease can be effected in less time than is possible in the later stages.

Stokes has shown that the pathological findings of syphilis appear concurrently with the clinical findings. We believe that the clinical and laboratory diagnosis should be complementary and subject to the same human limitations. During the last few years the trend has been to over-rate the laboratory and depreciate the clinical findings. The laboratory should be used routinely in all cases of suspected syphilis but the diagnostician should remember that if he allows the mechanically ordered test to replace the history and physical findings, some incorrect diagnosis will result. The ideal working basis is a good history and physical examination combined with laboratory tests. It should also be remembered that there is no single laboratory test for syphilis that is 100 percent accurate.

As stated above, the laboratory study of syphilis is limited to: (1) demonstrating the presence of treponema pallida in

*Read before the Southern Oklahoma Medical Association December 19, 1929.

local lesions by the darkfield illumination, various staining methods and cultivation; (2) demonstrating the presence of antibodies in the blood or spinal fluid by the complement fixation test; (3) demonstrating the presence of precipitins in the blood or spinal fluid by one of the various precipitation tests; (4) demonstrating the presence of syphilitic, cutaneous allergy by Noguchi's luetin test.

To facilitate the demonstration of the treponema pallida there should be close cooperation between the diagnostician and the laboratory. When a patient, who has a veneral lesion, presents himself for examination a careful history with any treatment that might have been used, should be conisdered. The initial lesion or chancre appears at the nidus of innoculation in a variable length of time after exposure; ranging from twenty-four to forty-eight hours (in mixed infections) to thirty days or longer. The appearance of the syphilitic lesion is by no means constant. It may vary from a very small, soft abrasion to a large, indurated sore. We have picked up positive darkfields on many lesions that were atypical. Therefore, it is our opinion that a darkfield examination should be made on all local venereal sores.

If the physician learns that the lesion to be dealt with has had treatment the darkfield should not be ordered before the second or third day. During this interval the patient should be instructed to use applications of sterile water or saline, with no other medications.

The following technic is used in the examination:

The sore is thoroughly washed with normal saline and rubbed or scraped until there is a free exudation of serum. Sometimes it is necessary to use suction or apply pressure to accomplish this. The treponema pallida are not always present in the superficial part of the lesion, therefore, it is well to apply pressure enough to obtain serum from the deeper recesses. The serum is put on a clean slide, covered with a cover glass and sealed with cedar oil or vaseline to prevent evaporation.

When the slide is prepared as directed, apparatus properly adjusted and the light correctly focused, the field of vision will have a brownish-black appearance except for the small particles in motion.

A search is then made for the treponema pallidum which appears as a very delicate, highly refractile, spiral organism; measuring about 24 by .7 microns. The variation in length of individuals is very great, ranging from 4 to 24 microns. These spirilla have short, definite spirals and move with a rotary motion.

When it is impossible to examine a fresh preparation with the darkfield the organism may be demonstrated by making smears and staining by one of the following methods: Burri's India ink; Harrison's Collargol; Goldhorn and Giemsa stain. None of these methods are as satisfactory as the darkfield illuminator.

The cultivation of treponema pallida and the production of the disease from culture was first successfully done by Noguchi in 1912. He and others have cultured the organism directly from the lesion of man, under strictly anaerobic conditions. The morphology and motility of these cultivated spirilli are quite typical.

In cases of suspected syphilis, after the primary lesion has healed, or passed the stage when the above described tests would be practical, the laboratory aid in diagnosis becomes a problem of the serologist. Here the cooperation of the diagnostician, who by combining the history and careful physical examination, determines the test he shall order. The practical test in most of these cases and the one generally used is the complement fixation of the blood serum, the so-called Wassermann reaction.

There are many technics used in the complement fixation test, but the one giving the greatest satisfaction and being most widely used at the present time, is that worked out by Kolmer. It has been our experience that this method is reliable, specific, sufficiently sensitive and should be satisfactory in the hands of any serologist, provided additional antigens are used for a check. In our laboratory, in addition to the Kolmer antigen we use a plain alcoholic and a cholesterinized antigen, and the results have been satisfactory.

We use the Kahn precipitation test in addition to the complement fixation test. The precipitation test has checked with the complement fixation test in from 92 to 95 per cent of the cases. We examine more bloods that give a positive complement fixation than a positive precipitation. Very rarely do we find one that gives a positive precipitation and a negative

complement fixation test. Therefore, we feel, as does the International Serological Congress, that neither test should be used alone. However, where only one test is to be employed we believe the complement fixation test to be the more reliable.

After the appearance of the primary lesion the time required to produce sufficient antibodies in the blood to give a positive complement fixation test, varies with the individual. Craig claims a 4 plus positive may be expected in the following percentage of cases: 14 per cent first week; 22 per cent the second week; 41 per cent the third week; 53 per cent the fourth week; 61 per cent the fifth week. One plus to 4 plus positive may be expected in the following percentage of cases: 90 per cent in the primary stage; 95 per cent in the secondary stage; 87 per cent in the tertiary stage, and 70 per cent in the latent stage.

Several factors influence the Wassermann reaction. Frambesia (Yaws) gives a positive reaction. Contamination of the serum with certain bacteria (especially the staphylococci and streptococci) may cause erroneous positives. Uncontaminated normal bloods give 100 per cent negative reactions. If the Wassermann is positive and the history is negative we believe that a second specimen of blood should be examined. In chronic syphilitic diseases of the nervous system, general paresis and tabes dorsalis, the positive reactions vary. In general paresis some have found as high as 100 per cent positive. In tabes dorsalis the positives occur in from 50 to 75 per cent. When the patients are being treated the findings depend upon the time, care and accuracy of the work being done.

Occasionally we have, what is called Wassermann fast blood. That is, the blood remains positive in spite of prolonged intensive treatment. Whether or not these reactions are due to treponema remaining in the tissues has caused many controversies, but it is our opinion the patient still has syphilis and should be treated as such.

All syphilitic cases should have an examination of the spinal fluid. This examination should consist of a cell count, globulin test, Lange's colloidal gold test and a complement fixation test. Such tests are especially indicated in cases showing manifestations of mental and nervous pathology. A positive complement fixation of the spinal fluid may be expected in 30 per cent or more of all cases in the secondary stage and from 15 to 20 percent of those in the tertiary and latent stages.

The various globulin tests (Ross-Jones, Nonni-Apelt, Noguchi, and Pandy) are generally negative in the early stages of syphilis, but the globulin content is increased in a majority of the cases of syphilitic diseases of the nervous system.

The Colloidal gold test was first recommended by Lange in 1913, as a method of distinguishing between certain syphilitic and non-syphilitic diseases of the nervous system.

The luetin test has not proved to be a general success, though some workers have given it their approval.

In conclusion: (1) It is our opinion that the diagnosis of syphilis should not be based upon either clinical or laboratory findings alone. (2) Many doubtful cases can be cleared up by close cooperation between the diagnostician and the laboratory. (3) Histories and physical examinations should be made to determine the proper test to order.

GIANT APPENDIX WEIGHING ONE POUND SIX OUNCES

The appendix in the case reported by E. Dunbar Newell, Earl R. Campbell and J. Marsh Frere, Chattanooga, Tenn. (Journal A. M. A., June 15, 1929), an enormous bent pear-shaped cystic mass, measured 7 by 8 by 16 cm. and weighed 659 gm. The lumen at the site of removal from the intestine was 3 cm. in diameter. No acute inflammation was seen and the lumen was open from end to end, neither stricture nor stenosis being present. Microscopic examination revealed a thick dense wall composed entirely of fibrous tissue. No lining membrane was found, and only a flat, scant, serous coat was present. A diagnosis of mucoid cyst of the appendix was made.

BOTULISM FROM INGESTION OF RIPE FRUIT

Death occurred from botulism in a case reported by Willard J. Stone, Pasadena, Calif. (Journal A. M. A., June 15, 1929), in which the symptoms of poisoning developed about half an hour after the ingestion of a ripe persimmon. The early symptoms were nausea and difficulty in swallowing followed within a few hours by diplopia due to extra-ocular muscle paralysis, rapid heart rate due to paralysis of the vagi, and eventually respiratory paralysis. Neocropsy revealed as the most important observations acute parenchymatous changes involving the brain, heart, liver, spleen and kidneys, with marked acute fatty degeneration of the heart muscle and liver.

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EDITORIAL

WELCOME TO SHAWNEE

No one likes to go to a funeral, neither does one care to visit a dead city, and when you come to Shawnee, don't come in mourning, but come prepared to meet a bunch of active, energetic people who are prepared to show you a good town and a good time.

Although Shawnee is a comparatively young city, it has kept pace with the times and has many places of interest for the visitor. Located in Woodland Park, three blocks from Main street is the original cabin of H. G. Beard, the founder of Shawnee. This cabin stands as a monument to the foresight of a man whose spirit is still manifested in the business men of Shawnee, they are not building just for today, but for years to come, by making every effort to care for the visitor and make him feel comfortable. This is shown by development of recreational and hotel facilities, and the courtesy extended to the visitors in order that he may enjoy the use of the Country Club, the Elks Club, and Meadow Lark Golf Link by obtaining golf courtesy cards from any of the principal hotels, which entitles him to the use of the golf link without payment of fees.

Shawnee's hotels offer ample accommodation for the visitor, with modern equipment and reasonable rates. The completion of the new Aldridge hotel has made it possible to care for the larger conventions.

Our local doctors, in conjunction with the Chamber of Commerce, are making elaborate plans for your entertainment and comfort while you are here, and we will be keenly disappointed if you do not come and we feel that you will be missing a real treat.

Oklahoma is the heart of the great Southwest, Shawnee is the heart of Oklahoma, so come to Shawnee the heart of the Great Southwest, and be welcomed by a host of friendly, homogeneous people.

—Contributed.

TO THOSE WHO SERVE

At the meeting of the Dallas Southern Clinical Society, Dr. Vilray P. Blair, St. Louis, succintly stated the proud position of the medical profession with reference to all cults. No doubt the conclusions voiced by Doctor Blair have occurred oft times to observing and irritated physicians who note the absurd movements of members of various cults and their varied attempts to fill the guise of competent physicians and surgeons. Dr. Blair concludes that every movement, institution, organization or corporation relies upon the "Regular" and never upon the cultist to care for their charges. Upon reflection, one does recall that during the World War no nation saw fit to employ in any branch of medical or surgical service for their armies or navies or for their allied forces, Christian Science, Osteo-

paths, Chiropractors, Faith Healers or any such similar "experts", who now stand forth offering their services to a deluded, gullible public.

The greatest and most ambitious expedition to the pole is just now being completed by Commander Byrd. The lives and health of the scores of men in this expedition were entrusted to high class and most competent physicians and surgeons. Nowhere does the cultist show as being necessary nor was he missed.

When it is recalled that the Army, Navy, Public Health Service, Vereran's Bureau, Indian Service, Interior Department, Agricultural Department, railroads, steamship lines, oil companies, manufacturers and all others holding the destinies of men under their care, employ physicians and surgeons only, it is no wonder that those physicians feel a proper pride in their position and justly feel entitled to class themselves among "Those who serve."

PREVENTION OF MALPRACTICE CLAIMS

The radiologist is in position to observe the beginning and ends of claims of malpractice. It is worth while to note some of the high points in a recent editorial* upon the prevention of malpractice claims. *Radiology* observes that one of the companies carrying a great deal of indemnity insurance has issued a series of suggestions, which, if followed by the general profession would aid in forestalling malpractice claims and suits. One of these is, "Make no admissions of liability on your part. Let your responsibility be determined by legal standards." It is a dangerous thing to discuss your case with anyone except your attorney. In one case a physician remarked that, "The radium was on too long, and it was his fault that the patient was burned." As a matter of fact, he did not apply the radium but only ordered it. The question of his legal liability for the acts of his assistant was undetermined.However, his statement that it was his "fault" was synonymous with "negligence" and cost him a judgment which was upheld by the State Supreme Court.

A physician treating a fractured tibia, discovered several days later a fractured fibula, and stated in substance that if he had discovered and treated the fractured fibula in the first instance, the recovery would have been complete.

Later the court in the case said: "These declarations, if made, were made by an expert assuming to treat plaintiff with ordinary skill and care and tended to prove want of ordinary skill and care in such treatments. This was competent evidence for the purpose offered, and made such a case as entitled plaintiff to go to the jury." Many such cases occur.

"Refrain from making remarks about any other doctor's work. Without dobut this is a common source of instigating malpractice litigation, and most such remarks are thoughtlessly made."

It is no longer a novelty for companies engaged in malpractice defense to have their doctors receive letters containing statements such as the following: "We have had him to two other doctors since. One doctor said we had a very good case for suit. The other said we were very unfortunate to have a job done like that. Both doctors will testify in court if they have to."

As a matter of fact, everyone knows that it is growing more difficult to get even the most unethical physician to go on the stand and testify against another physician. They usually find themselves in a very sad plight if they do so.

In one Oklahoma case it was impossible to get any physician to testify so the plaintiff called in a veterinary. The physician won the suit so rapidly that it seemed to almost bounce back from the jury.

Accurate records are absolutely necessary, not only for protection of the physician in the future but they are of necessity a part of the proper practice of medicine and surgery today. Very few physicians know or realize or if they do know they forget that a minor, treated years ago, may bob up at any time within two years after he has reached his majority and file an utterly groundless suit. If the physician keeps accurate records he is always fore armed and ready to meet such contingencies. *Radiology* believes that men "too busy to keep records deserve no protection in malpractice claims and in time will receive none."

In fractures, the importance of X-ray,

first, last and all the time cannot be too strongly urged. It has more than once occurred to the writer that in those cases where the patient is unable to pay for such services he should be called upon to assume, at least some of the reponsibility, but that responsibility should be assumed in writing and held by the physician for his protection. The surgeon should set forth the necessity for such work and if it cannot be had by reason of the patient's fault a witnessed record should then and there be made of that fracture.

*Radiology, Volume XIV, Number 5, May, 1930.

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Editorial Notes—Personal and General

DR. R. Q. ATCHLEY, Tulsa, sails June 6th for London and Berlin where he will take a post graduate course in surgery, returning about September 1, 1930.

DR. and MRS. H. C. ANTLE, Chickasha, left April 21, for New Orleans, where Dr. Antle will attend a post-graduate course in skin diseases and electro-therapy at Tulane University.

COMANCHE COUNTY MEDICAL SOCIETY met at Lawton, April 8th, for their regular meeting. A paper on "Digitalis" was presented by Dr. G. S. Barber, Lawton, followed by discussions.

DR. FRED H. ALBEE, New York, who will be a guest at the Annual Meeting at Shawnee, will hold a clinic at the Morningside Hospital, Tulsa, beginning at 9:30 A. M., Monday, May 26, 1930.

NOBLE COUNTY MEDICAL SOCIETY elected the following officers at a recent meeting: President, Dr. D. F. Coldiron, Perry; secretary, Dr. J. W. Francis, Perry; delegate to the State Medical Convention, Dr. B. A. Owen, Perry.

STEPHENS COUNTY MEDICAL SOCIETY were guests of Drs. L. L. Patterson and W. S. Ivy at their regular monthly meeting held March 25th, Duncan, at the First Christian church. The meeting was well attended, including a number of doctors from Oklahoma City.

GARVIN COUNTY MEDICAL SOCIETY met April 14th, at Dr. W. P. Greening's office for their regular meeting. The regular program was furnished by the dental profession of Garvin County. Dr. C. P. Bondurant, Oklahoma City, gave an address on "Common Diseases of the Skin."

OKMULGEE-OKFUSKEE COUNTIES held their regular joint meeting at the Parkinson Hotel, Okmulgee, on Monday evening, April 21, 1930. Dr. F. P. Baker, Medical Superintendent of The Eastern Oklahoma State Sanatorium, Talihina, gave a very interesting talk, "Tuberculosis in Childhood."

CADDO COUNTY MEDICAL SOCIETY met at Hinton, Okla., for their April meeting. Interesting papers were read by Drs. McClure and Leeds, both of Chickasha. Luncheon was served the physicians by the ladies of the Christian church, where the meeting was held. There were many out-of-town guests.

LINCOLN COUNTY MEDICAL SOCIETY had their regular monthly meeting at Prague, April 2. The main feature of the meeting was a lecture by Dr. Ray M. Balyeat, Oklahoma City, on "Asthma, Hay Fever and Other Diseases Due to Allergy." Drs. J. Elmer Hughes and Wm. M. Gallaher, Shawnee, were guests at the meeting.

DRS. D. W. GRIFFIN, L. A. TURLEY, and GAYFREE ELLISON, Norman, were hosts April 7th, when they entertained about twenty-five members of the Oklahoma City Academy of Medicine and eighteen members of the Cleveland County Medical Society with a dinner at the Academy. Dr. Charles Brake and Dr. C. R. Rayburn gave an illustrated lecture on "Organic Conditions of the Brain." Dr. Dick Lowry spoke on "Obstetrics."

MUSKOGEE COUNTY MEDICAL SOCIETY held their regular meeting Monday, April 27th. Oklahoma physicians furnished the program. Dr. A. L. Blesh addressed the society on "Surgical Mortality and Morbidity"; Dr. J. Z. Mraz, on "The Diseases of the Upper Urinary Tract"; and Dr. W. W. Rucks on "Peri-Nephritic Infections." The meeting was well attended and the speakers held the close attention of all physicians. The addresses and papers were very much to the point and unusually profitable.

DRS. T. J. LYNCH and J. O. LOWE, formerly of the Okmulgee Clinic, have removed to Tulsa, and have their offices in the Philcade Building. The remaining members of the clinic have consolidated with the Ming-Vernon-Stark Clinic to form the Okmulgee Clinic at 220 So. Morton. The members are: W. C. Mitchener, C. M. Ming, W. C. Vernon, W. W. Stark, L. B. Windham. Dr. G. C. Moore, formerly with the Ming-Vernon-Stark Clinic, has announced his removal to Ponca City, where he will limit his practice to Ear, Eye, Nose and Throat.

GARFIELD COUNTY MEDICAL SOCIETY held its fifth annual guest day meeting at the Youngblood hotel, April 28. About 100 physicians from northwest Oklahoma, including Oklahoma City, Guthrie and El Reno attended. The program follows: "A Country Doctor Takes A Look at Female Complainta," Dr. Arthur E. Hertzler, Halstead, Kansas; "Simplicity in Infant Feeding," Dr. Hugh L. Dwyer, Kansas City, Mo; "The Female Urethra. A Much Overlooked Field," Dr. A. L. Folsome, Dallas, Texas; "A Discussion of the Physiology and Pharmacology of the Vegetative Nervous System," Dr. G. Wilse Robinson, Kansas City, Mo; "Compression Therapy, with Special Reference to Cauterization of Adhesion (Tuberculosis)," Dr. LeRoy S. Peters, Albuquerque, N. Mexico.

GRADY COUNTY MEDICAL SOCIETY met April 4th, for their regular meeting and luncheon at the Legion Hall, Chickasha. Dr. Charles Rayburn, Norman, spoke on "Head Injuries" his

address being illustrated by lantern slides. Dr. U. C. Boon, Chickasha, presented a paper on "Sinusitis" in which he discussed nasal troubles with climatic conditions being one of the causes. The honor guest of the meeting was Dr. Calvin R. Hanna, professor of Obstetrics in Baylor University, Dallas. He discussed "Post Partum Care," illustrating his lecture with lantern slides.

The following physicians registered at the Dallas Southern Clinical Society, April 14th: Drs. E. A. Aisenstadt, Picher; J. W. Baze, Chickasha; G. F. Border, Mangum; P. B. Champlin, Enid; H. D. Collins, Oklahoma City; O. J. Colwick, Durant; D. S. Downey, Chickasha; L. E. Emanuel, Chickasha; Roy Fisher, Frederick; W. E. Floyd; Holdenville; F. L. Flack, Tulsa; Onis Franklin, Broken Arrow; W. A. Fuqua, Grandfield; R. B. Gibson, Ponca City; C. H. Guild, Shidler; J. M. Harris, Wilburton; C. T. Harris, Kiowa; C. M. Harrison, Comanche; J. I. Hollingsworth, Waurika; J. L. Holland, Madill; W. S. Ivy, Duncan; O. R. Jeter, Mangum; E. A. Johnson, Hugo; W. N. John, Hugo; W. W. Kerley, Anadarko; O. A. Kirby, Marietta; N. H. Lindsey, Pauls Valley; W. T. Mayfield, Norman; Jessie S. Little, Minco; H. C. Floyd, Hobart; M. L. Lewis, Ada; S. O. Marrs, Chickasha; Elias Margo, Oklahoma City; H. M. McClure, Chickasha; J. E. McDonald, Tulsa; M. C. McNew, Ada; E. B. Mitchell, Lawton; A. W. Nunnery, Chickasha; C. E. Northcutt, Ponca City; C. D. F. O'Hern, Tulsa; G. Pinnell, Miami; C. C. Pruitt, Comanche; E. W. Reynolds, Bristow; R. L. Russell, Marlow; J. C. Rumley, Stigler; W. G. Ramsey, Quinton; W. E. Seba, Leedey; L. P. Smith, Elmore City; W. W. Stark, Okmulgee; A. B. Stephens, Seminole; R. C. Sullivan, Ardmore; C. A. Thompson, Muskogee; W. A. Tolleson, Eufaula; L. C. Vance, Ponca City; W. J. Wallace, Oklahoma City; J. H. White, Muskogee; R. B. Witcher, Tulsa; Reed Wolfe, Hugo; W. S. Works, Bennington; W. K. West, Oklahoma City.

DOCTOR S. HALL KIMMONS

Dr. S. H. Kimmons, pioneer Tulsa physician, died at a Tulsa hospital, March 25th, of heart disease. Dr. Kimmons, who was sixty-two years old, had been ill several weeks.

Dr. Kimmons was born in Oxford, Kansas, in 1868. His early schooling was obtained in the country schools of this place, after which he entered the University of Mississippi where he received his A. B. and M. A. degrees. He came to Tulsa in 1900, where he began the practice of medicine.

He is survived by his wife, a brother and two nieces.

Burial was made at Memorial Park.

A MESSAGE TO PHYSICIANS

In The Journal of the American Medical Association for October 12, 1929, it was announced that the Council on Pharmacy and Chemistry had established a Committee on Foods to examine food products and literature regarding their composition and the claims made in relation to their application and usefulness—all subject to a series of rules under which the Committee on Foods proposes to operate.

The purpose of the above statement is first, to acquaint the reader with the above movement in the interest of public health, and second, to advise that Mellin's Food and literature concerned have been considered and that Mellin's Food is accepted by the Committee on Foods and that the Mellin's Food Company is entitled to make use of the fact in advertising material and is permitted to use the "seal" of the committee. Your attention is requested to this insignia which is reproduced in the Mellin's Food Company's advertisement in this issue.

For a great many years accurate analysis of Mellin's Food and of Mellin's Food as prepared for the feeding of infants and as applied in the management of the diet in illnesses of children and adults have appeared regularly in this publication and in literature placed in the hands of physicians generally.

Notwithstanding the fact that this consistent work with the medical profession had long ago resulted in establishing Mellin's Food as a product of superior quality, it must be gratifying to the Mellin's Food Company to have it all confirmed by a committee acting upon the authority of the American Medical Association.

DOCTOR, WHO ARE YOUR "COMMERCIAL" FRIENDS?

Now when the physician is beset on all sides to try products "just as good as Mead's", it is well for the physician to consider that in a commercial age when the practitioner must compete with newspaper, magazine, radio, tradesman and without a license, here is one manufacturer who patent food manufacturers who practice medicine unceasingly works for the medical doctor's economic as well as professional interests. Hold fast to that which is good—the Mead Policy which makes Mead Johnson & Company more than a commercial house—a powerful ally that pratices as well as preaches ethics.

INFECTION WITH ORGANISMS OF VINCENT'S ANGINA FOLLOWING HUMAN BITE

The infection is usually limited to the mucous membranes. In the case reported by C. Rex Fuller and John C. Cottrell, Salida, Colo. (Journal A. M. A., June 15, 1929), the infection occurred in the finger following a bite by a person suffering from ulcerative stomatitis due to Vincent's angina.

PROGRAM

THIRTY-EIGHTH ANNUAL SESSION, OKLAHOMA STATE MEDICAL ASSOCIATION, SHAWNEE, MAY 26-27-28, 1930

Meeting Places — Shawnee High School Building, Telephone 326.

Hotel Headquarters—Hotel Aldridge, Telephone 3300.

Registration — All physicians, except those from outside the State and visiting guests, must hold membership certificate for 1930 before they may register. If you are not in good standing see your county secretary at once and arrange the matter before coming to Shawnee, if possible.

Delegates—The Credentials Committee of the House of Delegates will register delegates at the Aldridge Hotel during the afternoon of Monday, May 26th. Delegates should present their credentials prior to the meeting if possible in order not to delay the formation of the House.

Papers—Are the sole property of the Association and are not to be taken from the meeting place but should be deposited in the office of the State Secretary or with the Section officers. These should be prepared in triplicate; a copy sent to the person who will discuss it, and one reserved for the author. Before final publication of any paper, proof will be submitted to the author for his correction. Papers should be double spaced with wide margins, and should contain: Title, name of author, his address and his office or street number. Observance of the above will save a great deal of correspondence in the future.

House of Delegates — The House of Delegates will meet at 8:00 P. M., Shawnee High School Building, May 26, for the transaction of such business as is necessary. The House of Delegates will also meet at 8:00 A. M., Tuesday, May 27, for the election of officers. It will meet thereafter upon its own decision, should its affairs necessitate. Matters of finance and those pertaining to the business affairs of the Journal and Association should be presented to the Council and not to the House of Delegates.

Council — Will meet at the Hotel Aldridge, Monday, May 26, 3:00 P. M., and thereafter upon the call of the President. It is the function of the Council to originate all business affairs of the Association and they must be presented to that body for action before they may be acted upon by the Houe of Delegates.

Hotel Rates—The following are the names of hotels and rates. The rate given is for one person in room. For each additional person in room approximately fifty cents increase is the charge.

Aldridge Hotel	$4.00
Walcott Hotel	2.50
Norwood Hotel	2.00
Los Angeles Hotel	1.50
Baker Hotel	2.00
Travelers Hotel	2.00
Dixie Hotel	2.50
Majestic Hotel	1.00

In addition to the hotel rooms a number of rooms in private homes may be had for which the rate will be $2.00 per night.

SECTIONS AND MEETING PLACES

Exhibits—All exhibits and registration will be on the main floor of the High School building and all sections will be held on the same floor.

General Medicine—Will meet in Room B-3.

Surgery—Will meet in the Auditorium.

Eye, Ear, Nose and Throat—Will meet in Room B-13-14.

Morning Sessions

Will be held Tuesday, May 27, and Wednesday, May 28, beginning at 8:00 A. M., with the following schedule:

8:00 Orthopedic Clinics: *"Simple Fractures of the Upper Extremity"* by DRS. W. K. WEST, C. R. ROUNTREE and H. O'DONOGHUE, Oklahoma City.

9:30 Moving Pictures—*"Technique of Blood Transfusion"*, 30 minutes; *"Normal Heart,"* 15 minutes; *"Rabies"*, 15 minutes:

10:30 Joint Scientific Meetings:

1. Address, DR. AUSTIN A. HAYDEN, Executive attending Oto-Laryngologist, St. Joseph's Hospital; Treasurer of the American Medical Association, Chicago.
2. *"The Significance of Certain Physiologic Facts in the Surgery of the Abdomen"*, DR. JABEZ JACKSON, Kansas City, Mo.
3. *"Spinal Cord Tumors"*, DR. FRANK R. TEACHENOR, Kansas City, Mo.

WEDNESDAY, MAY 28, 1930

(*Morning*)

8:00 Orthopedic Clinics: *"Simple Fractures of the Lower Extremity"* by DRS. W. K. WEST, C. R. ROUNTREE, and D. H. O'DONOGHUE, Oklahoma City.

9:30 Moving Pictures—*"Acute Appendicitis,"* (Professional), 30 minutes; *"Treatment of a Normal Breech Presentation,"* 30 minutes.

10:30 Joint Scientific Meetings:

1. *"Recent Advances in Bone Surgery,"* illustrated with slides and moving pictures, DR. FRED H. ALBEE, New York City.
2. *"The Use of Sodium-iso-amyl-ethyl-barbiturates as a Surgical Anesthesia,"* DR. W. E. SISTRUNK, Dallas Texas.

HOUSE OF DELEGATES

Will meet Tuesday, May 27, 8:00 A. M.

All Scientific Sections will begin at 1:30 P. M., Tuesday and Wednesday, May 27 and 28. Chairmen and secretaries and their assistants will urge those interested in attendance on their meetings to be prompt in order to complete the programs as scheduled.

LADIES' AUXILIARY

TUESDAY, MAY 27, 1930

10:00 A. M. Business Meeting, Hotel Aldridge. 3: to 5:00 P. M.—Tea, Shawnee Country Club.

WEDNESDAY, MAY 28, 1930

10:30 A. M. Visit to St. Gregory's Art Gallery. Wednesday P. M.—Theater, at Bison.
Wednesday evening—Picnic at Shawnee Country Club.

DINNERS

Thursday evening, 6:00 to 8:00 P. M.—Reserve Officers, Medical Fraternity, Women Physicians, Indian Service and Public Health, Aldridge Hotel.

GOLF

MONDAY, MAY 26, 1930

Golf will be played at the Shawnee Country Club, the Elk's Club, and Meadow Lark Club. The tournament will be at the Shawnee Country Club.

PROGRAM, GENERAL MEETING

Auditorium, Shawnee High School Building
MAY 27, 8:15 P. M.

DR. R. M. ANDERSON, Shawnee, *General Chairman*, Presiding

Invocation — DR. R. M. C. HILL, McCloud, Okla.

Music

Adress of Welcome—DR. J. A. WALKER, Shawnee.

Response to Address of Welcome—DR. A. S. RISSER, Blackwell.

Music.

Introduction of Guests—

1. DR. JABEZ N. JACKSON, Ex-President of the American Medical Association, Kansas City, Mo.
2. DR. AUSTIN A. HAYDEN, Executive attending Oto-Laryngologist, St. Joseph's Hospital, Treasurer, American Medical Association, Chicago.
3. DR. C. M. SISTRUNK, Dallas, Texas.
4. DR. FRANK R. TEACHENOR, Kansas City, Mo.
5. DR. FRED H. ALBEE, New York.

Introduction of President-Elect FERGUSON, Oklahoma City.
DR. W. ALBERT COOK, Tulsa.

President's Address—DR. E. S. FERGUSON, Oklahoma City.

Address—DR. C. M. ROSSER, Dallas, Texas.

Oklahoma Pediatric Society will meet Monday, May 26, in room B-13-14, High School building. Information relative to this meeting may be obtained from DR. CLARK H. HALL, Medical Arts Building, Oklahoma City.

WEDNESDAY, MAY 28, 6:00 P. M.

Picnic dinner for physicians and their wives at Shawnee Country Club.

ORATIONS

8:00 P. M.

DR. WM. PAT FITE, Muskogee—*"Present Day Trend of Surgical Anesthesia."*

DR. D. D. MCHENRY, Oklahoma City—*"Some Don'ts in Eye, Ear, Nose and Throat Work."*

DR. D. W. GRIFFIN, Norman—*"Psychiatry in Medicine."*

9:00 P. M.

President's Reception and Dance.

EYE, EAR, NOSE AND THROAT

T. G. WAILS, *President*, Medical Arts Building, Oklahoma City.

RURIC N. SMITH, *Secretary*, Medical Arts Building, Tulsa.

TUESDAY, 1:30 P. M.

1. President's Address: THEODORE G. WAILS, Oklahoma City — *"The Eye and Ear in Brain Pathology."*
2. *"Foreign Bodies in the Eye Ball"*—W. ALBERT COOK, Tulsa.
   Discussion opened by D. D. MCHENRY.
3. *"Streptococcic Septicemia with Throat and Middle Ear as Infection Atrium"* — ALONZO C. MCFARLING, Shawnee.
   Discussion opened by M. K. THOMPSON, Muskogee.
4. *"The Bronchoscopic Treatment of Non-Tuberculous Lesions of the Lungs"*, Illustrated by slides and moving pictures—SAM E. ROBERTS, Kansas City.
   Discussion opened by AUSTIN L. GUTHRIE.
5. *"Maxillary Sinus Infections"* — H. COULTER TODD, Oklahoma City.
   Discussion opened by SAM E. ROBERTS.

WEDNESDAY, 1:30 P.M.

1. *"Treatment of the Phorias and Tropias"*, Illustrated by moving pictures —CHAS. B. BARKER, Guthrie.
   Discussion opened by M. K. THOMPSON.
2. *"Hearing—Examination and Conservation,"* motion pictures—AUSTIN A. HAYDEN, Chicago.
   Discussion opened by E. S. FERGUSON.
3. *"The Effect of High Explosives on the Hearing"*—W. T. SALMON, Duncan.
   Discussion opened by LESLIE M. WESTFALL.
4. *"Detachment of the Retina"*—LOUIS C. KUYRKENDALL, McAlester.
   Discussion opened by CHAS. H. HARALSON.
5. *"Report of an Eye Case"*, Drawings—CHARLES M. FULLENWIDER, Muskogee.

GENERAL SURGERY, GYNECOLOGY OBSTETRICS AND UROLOGY

A. RAY WILEY, *Chairman*, Medical Arts Building, Tulsa.

WM. C. VERNON, *Chairman*, Okmulgee.

TUESDAY, MAY 27, 1930, 1:30 P. M.

1. Chairman's Address: *"Non Pentrating Abdominal Injuries"*—A. RAY WILEY, Tulsa.
2. *"Is Gastroenteroptosis a Surgical Condition?"*—F. A. HUDSON, Enid.
3. *"Juvenile Deforming Osteochondritis"* — S. R. CUNNINGHAM, Oklahoma City.
   Discussion opened by WADE SISLER, Tulsa.
4. *"Fractures of the Neck of the Femur"*—EARL D. MCBRIDE, Oklahoma City.
   Discussion opened by L. S. WILLOUR, McAlester.
5. *"Compression Fractures of the Vertebre"*—I. W. BOLLINGER, Henryetta.
   Discussion opened by E. A. AISENSTADT, Picher.
6. *"Low Back Pain"*—E. MARGO, Oklahoma City.
   Discussion opened by W. K. WEST, Oklahoma City.
7. *"Some of the Newer Methods of Plastic Surgery"*—CURT VON WEDEL, Oklahoma City.
   Discussion opened by FRED CRONK, Tulsa.
8. *"Obstetrical Observations"* — M. B. GLISMAN, Okmulgee.
   Discussion opened by GEORGE P. OSBORN, Tulsa.
9. *"The Injection Treatment of Varicose Veins"*—R. Q. ATCHLEY, Tulsa.
   Discussion opened by L. J. STARRY, Oklahoma City.
10. *"Urologic Diagnosis for the General Surgeon"*—BASIL A. HAYES, Oklahoma City.

Discussion opened by O. R. GREGG, Enid.

11. *"Vascular Accidents in Surgery"*—T. J. LYNCH, Tulsa.
Discussion opened by I. B. OLDHAM, JR., Muskogee.
12. *"Vesico-Vaginal Fistulas"* — J. Z. MRAZ, Oklahoma City.
Discussion opened by A. W. PIGFORD, Tulsa.
13. *"Some Remarks on Anaesthesia"*—J. E. HUGHES, Shawnee.
Discussion opened by H. B. STEWART, Tulsa.

WEDNESDAY, MAY 28, 1930, 1:30 P. M.

1. *"The Diagnosis and Cure of Trigeminal Neuralgia Major"* — WM. T. COUGLIN, St. Louis, Mo.
2. *"Thoracic Surgery"* — DUFF ALLEN, St. Louis, Mo.
3. *"Localization of Spinal Cord Tumors"*—N. R. SMITH, Tulsa.
Discussion opened by HORACE REED, Oklahoma City.
4. *"Spinal Anaesthesia"*—E. R. RICE, St. Louis, Mo.
5. *"Mobile Ascending Colon"*—FRANK J. STANISLAV, Waco, Texas.
6. *"Toxic Goiters"*—LEROY LONG, Oklahoma City.
Discussion opened by W. PAT FITE, Muskogee.
7. *"The Heart in Surgery"* — W. J. TRAINOR, Tulsa.
Discussion opened by JOHN RILEY, Oklahoma City.
8. *"Structures of the Rectum"* — C. K. ALLEN, Oklahoma City.
Discussion opened by R. L. MURDOCK, Oklahoma City.
9. *"Perforating Duodenal Ulcers"*—OSCAR WHITE, Oklahoma City.
Discussion opened by J. B. ESKRIDGE, Oklahoma City.
10. *"Pyelonephritis in Women"*—FENTON M. SANGER, Oklahoma City.
Discussion opened by H. S. BROWNE, Tulsa.
11. *"Spinal Anaesthesia"*—W. H. LIVERMORE, Chickasha.
Discussion opened by A. L. BLESH, Oklahoma City.
12. *"Hyper-Ventilation in Post-Operative Pneumonia"*—PATRICK S. NAGLE, Oklahoma City.
13. *"New Surgical Procedure in Osteomyelitis"* DR. WADE SISLER, Tulsa.

GENERAL MEDICINE

ANTONIO D. YOUNG, *Chairman*, Medical Arts Building, Oklahoma City.

BEN COOLEY, *Secretary*, Norman.

TUESDAY, MAY 27, 1:30 P. M.

1. Chairman's Address: *"Head Injuries"*—A. D. YOUNG, Oklahoma City.
2. *"The Role of Respiratory Infections in Disturbances of the Heart"*—RUSSELL G. PIGFORD, Tulsa.
3. *"Amebiasis"*—A. W. WHITE, Oklahoma City.
4. *"Urticaria — Diagnosis and Treatment"*—R. M. BALYEAT, Oklahoma City.
5. *"Chemical Analysis of the Blood and Functional Tests As an Aid in Diagnosis"*—V. G. ISVEKOW, Shawnee.
Discussion opened by I. A. NELSON, Tulsa.
6. *"Saur Kraut Juice for the Acidification of Evaporated Milk in Infant Feeding Formulae"*—C. V. RICE, Muskogee.
7. *"Progressive Muscular Dystrophy"*—W. S. MASON, Claremore.
8. *"Syphilis and Its Relation to General Medicine"*—C. P. BONDURANT, Oklahoma City.
9. *"Report of Experiments as to the Effects of Some Drugs on the Blood Picture"*—L. A. TURLEY, Norman.
10. *"Pathology, From a Public Health Point of View"*—WALTER MILES, Oklahoma City.

WEDNESDAY, MAY 28, 1:30 P. M.

1. *Symposium—Syphilis in Infancy and Childhood*

(a) *"Symptoms and Diagnosis in the New-Born and Infancy"*—CLARK H. HALL, Oklahoma City.

(b) *"Symptoms and Diagnosis in Older Children"*—W. M. TAYLOR, Oklahoma City.

(c) *"X-Ray Findings"*—J. E. HEATLEY, Oklahoma City.

(d) *"Orthopedic Conditions"* — W. K. WEST, Oklahoma City.

(e) *"Dental Conditions"* — MERWIN C. HOWARD, Oklahoma City.

(f) *"Treatment"*—C. B. TAYLOR, Oklahoma City.

(g) *"Post-Volstead Alcoholic Psychosis"* —C. A. BRAKE, Norman.

(h) *"The Etiology and Pathogenesis of Acute Diffuse Glomerular Nephritis"*—E. RANKIN DENNY.

(i) *"Jamaica Ginger Peripheral Neuritis"*—E. GOLDFAIN and HUGH JETER, Oklahoma City.

(j) *"Maternal Mortality Survey of the State of Oklahoma"*—M. C. SHERIN, State Department of Health, Oklahoma.

ANNUAL REPORT

OF THE SECRETARY-TREASURER-EDITOR MAY 1, 1929, TO APRIL 30, 1930:

To Members of the Oklahoma State Medical Association:

Conforming with the Constitution and By-Laws, I hereby submit a condensed statement of our work for the time above indicated.

All books and papers pertaining to our business have been submitted to the Council for their action. All financial transactions have been certified to by the officers of the Commercial National Bank, Muskogee.

Membership: On April, 1929, we had 1584 members; on this report we have 1609.

Deaths in Our Membership: Since last year's report we have had to report the deaths of the following members, or former members:

Dr. A. J. Stephenson, Okemah.
Dr. Edgar E. Rice, Shawnee.
Dr. R. E. Looney, Nashville, Tenn.
Dr. E. R. Askew, Hugo.
Dr. Wm. J. Bamber, Arnett.
Dr. J. I. Taylor, Ringling.
Dr. John R. Collins, Nowata.
Dr. R. A. Lively, Durant.
Dr. J. J. Hardy, Poteau.
Dr. S. T. Campbell, Durant.
Dr. C. T. Hendershot, Tulsa.
Dr. S. H. Kimmons, Tulsa.
Dr. W. G. Lemmon, Tulsa.
Dr. W. B. Mead, Lawton.
Dr. N. R. Nowlin, Oklahoma City.
Dr. C. Z. Wiley, Tulsa.
Dr. J. H. Hayes, Enid.
Dr. J. J. Hoover, Oklahoma City.

Medical Defense: The following cases have been settled:

Canadian County, No. 8492.
Tulsa County, No. .....
Logan County, No. 6327.
Garvin County, No 9052.
Oklahoma County, No. 55,773.
The following cases are pending:
Pontoc County, No. 10278.
Pontotoc County, No. .....

In addition to these, there are nine cases in which the status is as yet unknown or pending:

Ottawa County, No. .....
Seminole County, No. .....
Grady County, No. .....
Tulsa County, No. .....
Custer County, No. .....
Bryan County, No. .....
Custer County, No. .....
Seminole County, No. .....
Garvin County, No. .....

Journal and Advertising: Our business affairs during the past year have been in a very satisfactory condition. For the year ending April, 30, 1929, we received $6558.11 for advertising and subscriptions; for the period ending April, 1930, we received $7619.95, a gain of $1061.84; while at the same time our Journal was 66 pages larger than the previous year.

We must again say that we received splendid support from our advertisers and all things being equal it is our duty to support them.

The Journal: It has been rather difficult to get and maintain a uniform sized Journal but in this respect we believe there has been some improvement during the year.

Finances: Herewith is condensed statement of the financial transactions since our last report:

FINANCIAL STATEMENT

The Oklahoma State Medical Association May 1, 1930

Receipts

May 1, 1929, Balance Cash on hand in bank	$ 4,595.70
Advertising and Subscriptions	7,619.95
County Secretaries	6,598.50
Exhibits	392.00
Interest on Time Deposits	258.75
Total Receipts	$19,464.90

Expenditures

Printing Journal	$ 5,681.00
Miscellaneous Printing and Office Supplies	664.83
Office Rent	482.82
Telephone and Telegraph	80.21

Stamps and Postage, Office & Journal	292.47
Press Clippings	60.00
Treasurers Bond and Audit of Books	150.00
Expense, Oklahoma City meeting	435.40
Refunds	6.00
Council and Delegates Expense	1,016.00
Expense Shawnee Meeting	19.78
Transfer to Liberty Bond	1,000.00
Accrued Interest and Premium on $10,000.00 Liberty Bonds bought	247.00
Transfer to Medical Defense Fund	600.00
Extra Clerical Work	86.35
Mrs. Oltha Shelton, Salary for year	1,200.00
Dr. C. A. Thompson, Salary to March 31, 1930	2,200.00
Dr. C. A. Thompson, Balance Salary April, 1929	149.25
Total Expenditures	$14,371.11
April 30, 1930, Balance Cash on hand in bank	5,093.79
	$19,464.90
May 1, 1930, Balance Cash on hand in The Commercial Natl Bank	$ 5,093.79
U. S. 4th 4¼% Liberty Bonds in safe deposit box in Commercial National Bank	7,000,00
Total Cash Assets	$12,093.79
April 30, 1930, Balance Cash on hand in Bank	$ 5,093.79
Check No. 3125 outstanding	40.00
Balance in bank as per their statement	$ 5,133.79

THE MEDICAL DEFENSE FUND

The Oklahoma State Medical Association
May 1, 1930

Receipts

May 1, 1929, Balance Cash on hand in bank	$ 222.73
Aug. 16, 1929, Okla. State Medical Association	200.00
March, 26, 1930, Oklahoma State Medical Association	400.00
April 26, 1930, Interest on Time deposits	120.00
Total Receipts	$ 942.73

Expenditures

Attorneys' Fee and Legal Expense	$ 650.00
Balance Cash on hand in bank	292.73
Total Expenditures	$ 942.73
May 1, 1930, Balance Cash on hand in bank	$ 292.73
U. S. 4th 4¼% Liberty Bonds in Safe Deposit Box in The Commercial National Bank	3,000.00
Total Cash Assets	$ 3,292.73
May 1, 1930, Total Cash Assets:	
Oklahoma State Medical Assn.	$12,093.79
Medical Defense Fund	3,292.73
May 1, 1930, Grand Total Cash Assets	$15,386.52
May 1, 1929, Grand Total Cash Assets	13,818.43
Total Net Gain Cash Assets for year	$ 1,568.09

Respectfully submitted,
C. A. THOMPSON,
Secretary-Treasurer-Editor.

(Signed) H. A. LEWIS,
Auditor.

Muskogee, Okla., May 9, 1930

Oklahoma State Medical Association,
Dr. C. A. Thompson, Secretary,
Muskogee, Oklahoma.
Gentleman:

According to our records, at the close of business April 30, 1930, there was a credit balance in the Oklahoma State Medical Association account of $5,133.79. Also, on the same date credit balance in the Medical Defense Fund of $292.73.

We also wish to advise that on April 29, 1930, we sold the Oklahoma State Medical Association, through Dr. C. A. Thompson, $10,000.00 par value, Fourth 4¼% Liberty Loan Bonds, 1933-38.

Yours very truly,
L. W. McLEAN,
Vice-President.

COMMITTEE REPORTS

These reports are made in compliance with provisions of the new Constitution and By-Laws which call for publication of such matter in the issue of the Journal preceding the Annual Session.

REPORT OF COMMITTEE ON TUBERCULOSIS

To the Oklahoma State Medical Association in Regular Session at Shawnee, Oklahoma, May 26, 27, 28, 1930.

The Committee on Tuberculosis desires to submit the following report:

The work of the State Public Health Association (formerly called The State Tuberculosis Association) and its local branches has been carried on under the direction of Dr. Carl Puckett, Executive Secretary. While much good has been accomplished, Dr. Puckett's activities are curtailed by limited finances. This means that every member of the profession should lend his support to the annual Christmas Seal Sale.

The two state sanatoria now have a capacity of approximately four hundred beds. Each institution carries a large waiting list.

The Committee recommends:

1. That the members of the medical profession give hearty support to the State Public Health Association, and the local tuberculosis societies.

2. That the family physician should be the most important factor in any case-finding scheme, and that he should not only bear in mind the importance of early diagnosis, in order that pre-

vention and treatment may be more effective, but with the recent progress in the treatment of advanced cases he must be prepared to make a discriminating study of such cases with a view of offering every opportunity to the otherwise hopeless sufferer, and the possible control of a prolific source of infection.

3. That the number of sanatorium beds be increased to meet the recommendations of the National Tuberculosis Association, one bed for each annual death.

4. That general hospitals be encouraged to provide for the reception, diagnosis, and at least, temporary care of tuberculosis cases.

(a) In justice to the sick.
(b) In fairness to the public.
(c) In order that nurses and internes may become familiar with the diagnosis and treatment of the disease.

5. That each county be compelled to cooperate with the State institutions in the care of their cases, and that they provide funds for their maintenance. The committee also recommends that both County and State cooperate in an effort to take care of the open cases in homes where children are exposed to infection, regardless of the question of priority on the waiting list. Removing the source of infection is much more important and more economical than taking care of the children after infection takes place. If new laws are necessary we recommend that these be referred to the Committee on Legislation. Since the capacity of the State institutions is inadequate to take care of the poor we recommend that the legislative committee be urged to secure effective legislation which will provide institutional care, at the taxpayers' expense, for all those who are unable to pay more than $10.00 per week, and which will require those who are financially able to pay to secure medical care at home or in private institutions.

L. J. MOORMAN,
F. P. BAKER,
ELLIS LAMB.

COMMITTEE ON MEDICAL EDUCATION AND HOSPITALS

The hospital has been called a Clearing House of Medical Science, and such it should be. Besides serving the people of the community in the conservation of health and life, the hospital is supposed to be an institution in which all the reputable physicians can meet on equal terms and share their experiences and their wisdom, thus making for the mutual improvement of the physicians themselves and their services to the people of the community. This is a fine ideal and it seems to be most nearly realized in those localities, cities or towns, where the hospital is a community institution. That is, where the financial and managerial burdens of the hospital are borne more or less directly by the public, and where all reputable, qualified physicians of the community have approximately equal rights and privileges to the facilities of the institution. Included in this category are public hospitals which are supported by taxation as well as those maintained by endowments and public benefactions, and whose direction is in the hands preferably of non-medical boards of administration.

While hitherto, physicians and other public spirited individuals have taken the initiative in providing hospital facilities, their largest availability and usefulness can be secured only by making them public institutions and maintaining them by taxation. The ill health of our citizens, accident, disease, and poverty are a community affair—a common burden on all our citizens, and the institutions and instruments with which to cure these ills should be public property, in the same way as are our city halls and courthouses, fire stations, our public schools, municipal electric lighting and water plants. Only so can the burden of sickness be equalized among all the citizens. Under present conditions the burden is borne: (1) Largely by the physicians who give unlimited gratuitous services; (2) by the unfortunate patients, whose illness is often no fault of their own but of circumstances and environment and untoward conditions for which even society as a whole may be responsible; (3) by the voluntary contributions of philanthropic citizens. The only way to correct abuses is to change the attitude of the public. It is necessary for us who are in a sense especially interested and conversant with these matters to become educated ourselves to the needs and then to become wise missionaries in disseminating knowledge and in educating the public into right lines of policy and action.

Unfortunately, however, we are confronted at the very outset, in multitudes of communities, by an unnecessary multiplicity of hospitals. This condition is taken by the public as proof positive that private hospitals are a money making and profitable business. Consequently, the laity, private individuals and public officials—city and county commissioners, for example—feel that hospital services should be available for less even than the rates of a first rate or even a medium class hotel. If the truth were told, many of our hospitals are laboring under a burden of empty beds and full overhead so that the deficit must be made up from the personal earnings of the surgeon-owners. We have in mind one large private hospital, the shortage of which has run as high as $60,000 annually.

Unfortunately, also, there is a suspicion that some few hospitals are operated by men whose qualifications are mostly a knowledge of the advertising value of propaganda and the association of ideas in the mind of the public. They are operators rather than surgeons—but this fine and vast difference the dear public is slow to grasp. Further, this multiplicity of unnecessary hospitals and duplication of needless equipment of hospitals often serves to divide the members of the profession in those communities, into antagonistic and warring cliques and factions. Hence, we have a condition which will require far more than mere "hospital standardization" to correct. The question arises: Who pays the bills under such conditions? the answer is: The doctor and the patient. Hence, we are pleading for a wiser arrangement whereby all the members of society may learn to join in bearing the burden and reaping the benefits which are bound to accrue from greater conservation and concentration of facilities and more perfect professional cooperation.

There are other further difficulties militating against the smaller hospital, especially if conducting a training school for nurses. The con-

tinually rising standards for hospitals and nurses is placing additional tremendous burdens on those who are trying to maintain such institutions. Consider the list of salaried employees which are considered necessary in a modern hospital and training school—superintendent, assistant superintendent or superintendent of nurses, surgical supervisor, dietitian, laboratory technician, physical therapy and X-ray technician, night supervisor, to mention only the more obvious— and it is plain that only a busy and well-financed hospital can long endure such a salary list. Add to this the turn-over in pupil nurses, the regular overhead, and the unavoidable losses in hospital fees, the cutting down of our clientele by the encroachment of community, State and other public free hospitals and free dispensaries, and we are pyramiding a burden of expenses too great to be borne, which shortly only a publicly endowed and tax supported institution will be able to meet.

And yet we find hospitals squandering uncounted thousands of dollars in marble fronts and needless ornamentation, largely for advertising purposes, for they serve no good ends for the patients within. We see the operating room provided with sterile goods for six nurses and assistants where one would be sufficient, and probably safer. We see thousands of dollars wasted annually on equipment of questionable utility, often out of date and its unutility demonstrated before it is paid for—a monument to the high power salesmanship of the manufacturers' representative. We see the rising standard of qualifications of nurses and the higher fees demanded by them reducing their availability for people of average salary, and the field even now being taken by practical nurses and attendants and midwives. And the end is not yet.

The outlook is not hopeless, however. There are hopeful trends and tendencies. If we of the hospital profession will clear our vision, the public can be gradually brought to right action. But only by our cooperation will the hospitals gain the proper support of all the citizens.

The primary necessity is a proper understanding of conditions on the part of the physicians, and unwillingness to sacrifice mistaken self interest to the common good. In many communities several hospitals could be combined under community maintenance and management, with untold benefits to both the profession and the people. Once the physicians unite and cooperate the laity can be persuaded.

There should be a more general and intelligent utilization of National Hospital Day—not to advertise the individual hospital, but to advance the community hospital idea among the people. Articles of interest and information should be published in our newspapers and periodicals. The radio should be utilized, laws securing more support for hospitals should be secured. But above all else, the committee feels that the mutual good will and wise cooperation of the physicians in the various communities is of most importance for the welfare of our hospitals and for those who serve or who are served by them.

A. S. RISSER,
A. W. WHITE,
P. N. CHARBONNETT,
Committee.

SCIENTIFIC WORK

We, your Committee on Science and Scientific Medicine, beg leave to make the following report:

The medical profession of Oklahoma is keeping step with the general advance in scientific understanding and treatment of disease, but is not contributing to the discovery of scientific facts nor methods for a better understanding or treatment of disease, with the exception of investigation in progress in the departments of the Medical School of the State University, which may have such possibilities. This state of affairs is not due to any lack of ability nor desire on the part of the members of the Association, but to conditions of which the Association should take cognizance and attempt to remedy.

That the medical profession of this State have a keen interest in and are keeping step with medical advance is evidenced by (a) the increasing numbers of practitioners who attend clinics and courses in medical centers in this country and abroad, and the numbers who attend the extension courses given at the medical school by the university; and (b) by the increasing numbers who attend medical conventions, general and special, and the interest shown in the programs given at these conventions. But of the great medical problems of this century, prophylaxis individual and public, the cancer question in its various phases, industrial and intrinsic causes of disease and ill health, no one is attempting to solve. This we feel is due to: (1) lack of facilities; (2) lack of leadership and guidance; (3) lack of finances; (4) pressure of the economic situation. In some cases, e.g. (1) the lack is more fancied than real. The cases which daily pass under each ones notice are the material that must be studied in any problem. The lack is more a knowledge of methods than facilities as such. The fault here is perhaps that of medical education which, in the main, at present, herds the students as it were, from the pastures of general education through lanes and chutes to be loaded and shipped out as physicians. They must think, but think prescribed thoughts, learn, but learn formulas and stereotyped technique. This is no criticism or requiring proven technique, but a student fed on this type of instruction, then thrown into the economic maelstrom, if he has not already learned methods of investigation, is not apt to learn them after he begins practice. This matter is, however, a problem of medical education, but recognition of it by this Association and some request that it be solved, and cooperation in its solution should be made. Points (2) and (3) will be discussed later.

In the laboratories of the medical school, investigations are in progress in reasons for errors in sugar determinations, which will be of great importance in clinical pathology; studies in recuperative process in epidermis, which will be of value in skin grafting and healing wounds; effects of certain drugs on blood, of importance in use of such drugs; nature and character of endarteritis and arteriosclerosis, which may throw light of therapeutic value on those conditions; and a number of other studies of value are being pursued.

We wish to make a few comments and recommendations on the following points: The lack of

leadership and finances for scientific investigation in medical problems. We do not wish to be understood as casting any aspersions or criticisms on the State Board of Health nor the departments of the medical school nor other agencies engaged in general medical work, because they are all doing excellent work and all that can be expected of them. They have their daily grist of work to do and have not the time to give to the propositions. What we do mean is that there should be a research institute created, manned by competent workers who would give their time and attention to initiating, conducting and assisting in research work. Further that facilities and funds be provided for this work. We recommend that this State Association take steps to encourage and demand that this need be satisfied. The Association could itself make an endowment for such work. The State Association of Missouri has pledged itself to an endowment of $1,000,000.00 and has paid in $250,000.00 of it several years ago. Such an endowment could be raised by increasing the dues of its members. The Association could further individually and by units encourage gifts from rich people to such a program, making a living monument for the donor. In this way this association could be rendering a real service to itself and the State.

Respectfully,
R. M. HOWARD,
P. P. NESBITT,
H. C. WEBER.

CANCER STUDY AND CONTROL

To the Officers, the House of Delegates, and the Membership of the Oklahoma State Medical Association.

We, your Committee on Cancer Study and Control, submit our report for the year of 1929-30, as follows:

We have not attempted any major activity during the year though have not been entirely idle since our last meeting. We have directly or indirectly been responsible for numerous programs featuring cancer and have distributed several hundred pamphlets furnished by the American Society for the Control of Cancer. There have been numerous addresses upon the subject of cancer given before both public and medical audiences.

Through the courtesy of the American Society for the Control of Cancer, we have been privileged to book for a period of two weeks the wonderful "Dr. Canti Three-Reel Cancer Film." At the time of this writing, our program has been outlined and dates given for the showing of this film before joint meetings of county medical societies in different localities which will cover the larger portion of our State. The program begins with the exhibition of the film at Chickasha, April 8th, and ends at Oklahoma City, April 19th.

Physicians everywhere have shown an increasing interest in and have become more anxious to obtain knowledge upon the subject of cancer. The public also has manifested even a greater interest in certain localities than physicians, due, no doubt, to the wide newspaper publicity of the experimental work upon cancer which has been announced from some two or three different research laboratories within the past eight months. These reports have been carried frequently and extensively by the Associated Press. Perhaps a larger space has been devoted to the discussion of cancer by the public press during the past year than in any previous year in which cancer education has been undertaken.

There may be a question raised as to the value of this publicity though all will agree that it may possibly aid in the stimulation of greater interest on the part of the public, which may eventually lead to national or private appropriations or endowments for further research work. European countries, several years ago, set an example by making appropriations for cancer research work though our own beloved United States has sadly neglected such assistance. Time and space will not permit of even a brief review of all the interesting and most valuable announcements from research laboratories which have recently occurred.

One of the most outstanding and one which is destined to bear fruit was made by Dr. Boris Sokoloff of St. Louis, before the Congress of Physiology at Boston, August 19, 1929. In this report he announced the lytic degenerative changes which he had obtained in cancerous growths by the injection of various organic extracts, more especially that of the omentum and suprarenal cortex extract to which has been added an iron salt.

Since January 1st, the newspapers, also the medical journals, including the Journal A. M. A., have devoted much space, including numerous editorials upon the cancer research work of Drs. Coffey and Humber. These doctors have been subject to much criticism by our profession for lack of proper censorship of these articles though the doctors themselves appear to be in good standing with their state society and have endeavored to give careful, accurate reports to the Journal of the American Medical Association as regards their work.

No clearer explanation of their work and claims can be here delineated than that of a verbatum quoting of the last paragraph of their article which was published in the Journal of the American Medical Association, February 1, 1930, page 359:

"This work to date has been purely of an experimental nature to determine the effect on malignant tumors. Softening with liquefaction has occurred in all tumors thus far studied. These tumors, except one, were carcinoma of different types; the exception is a recurrent spindle cell sarcoma, with extensive metastases. Because of these results, a broad plan of study has been outlined with a determination to discover as soon as possible the value, if any, of this extract in cancer. Until such time as additional data becomes available, we wish to impress on the medical profession the fact that the work to date, although quite promising, is still in the experimental stage and therefore decidedly inconclusive."

Summarizing, it appears that the past year will be an epoch in the history of medicine on account of the unusual interest stimulated in study and research upon the etiology and treatment of cancer by organic glandular extracts.

EVERETT S. LAIN,
Chairman
FRANK McGREGOR,
JAMES STEVENSON

REPORT OF COMMITTEE ON MEDICAL ECONOMICS

"Keep your office and your office will keep you." That is a saying that is absolutely true. The doctor who pays attention to his practice, who gives his patients to understand that he expects to be paid for his services, who works at his job, need not worry that he will not succeed financially. He will have sufficient money to get away at frequent intervals for post-graduate study and for recreation. This is a duty that he owes to his patients as well as to himself.

In the matter of investments, the doctor has long been included on the "sucker lists" of many "get-rich-quick" schemes. We cannot blame our patients for trying out the various health fads that come along when we ourselves invest money so foolishly. We must get the habit of consulting our banker on the matter of investments the same as we would have our patients consult us on the matter of health. He is an expert in his line the same as we must be experts in ours.

The doctor must guard against the use of his time and information being capitalized on by promoters of pseudo-health schemes, either individuals or organizations. We should give all the assistance we can to the spreading of knowledge along the lines of public health. But the doctor should not be expected to give his professional services free, in the way of examinations or treatment, to persons who are able to pay. Even the burden of taking care of the poor should be borne by the public funds, state, county and city. If the average charge for an office call is $1.00 and the average cost of a vaccination point is 15 cents, why should the State furnish only the virus? Part time or full time health officers, doctors or nurses should do this work and there should be a sufficient number employed to be able to handle it.

Study the business side of your profession. Keep accurate records of your cases. Keep accurate finanical accounts. Send out your statements promptly. Have some follow-up plan. Turn over your past due accounts to a retailer's association or attorney for collection before they are outlawed. Your professional knowledge is your stock in trade and you must make it pay dividends. If you do not do this you cannot properly meet the responsibilities that you are expected to assume in the community in which you live. You cannot give your best service to those who come to consult you.

Respectfully submitted,

WM. H. BAILEY,
Chairman.

REPORT OF COMMITTEE ON CONTRACT AND INDUSTRIAL PRACTICE

In making the report on contract and industrial practice the committee feels that a brief resume of the laws relating to the medical features of the law, should be made.

The employer coming under the law is required to furnish adequate medical services for an injured employee and he can indicate whatever physician he wishes to have take care of that case, and direct where the employee shall go for treatment. If the employee takes matters into his own hands the Commission does not have jurisdiction. However, the employer may waive his right in the case and should he do so the insurance carrier is liable. Should the designated physician advise that the injured employee be treated elsewhere, this may be done upon the authority of the employer. Should he not furnish the proper care the employee is entitled to go to some physician for care or to appeal to the Commission for medical treatment. It is implied that the insurance carrier, as it has the same interest as the employer, can designate the physican where agreement is reached with the employer, and in a general way acts as the employer's agent in matters relating to the injured employee. A man is entitled to sixty days' treatment and the payment for hospital, nurse, medicines and appliances necessary in his case. Should the period of treatment extend beyond sixty days and the employer agrees or the Commission be appealed to, the period of treatment can be extended for such time as is necessary. The charges in all cases should be those commensurate with the patient's ability to pay and the usual charges for similar services in the locality from which the case originates. Charges for over $100.00 are subject to approval by the Commission. Where the doctor and the insurance carrier admit the necessity of a nurse after the sixty days period the doctor is impliedly authorized by the insurance carrier to employ the nurse.

A physician may present his bill any time within three years after rendering the service in those cases in which verbal authority was given by the employer and within five years if a written contract existed. If an injury ends with death to the employee that case is without the jurisdiction of the Commission and comes within the jurisdiction of the State courts, but the insurance carrier is liable for expenses of necessary treatment. If an employe refuses examination when ordered by the Commission, he is denied compensation from that time until such a time as he presents himself for examination. The Commission has jurisdiction to make awards to physicians for services rendered where these services were rendered on verbal requst of the employer. Where a written contract is in effect the provisions of the contract hold.

It is the observation of the committee that the status of the industrial employe and the physician involved in the State of Oklahoma is much better than that in many other states inasmuch as the law provides all the adequate treatment in any case. In some states this is not true, there being a definite limit both as to the amount of expense and to the period of hospitalization.

The committee believes that the attitude that some of the insurance companies and larger employers are coming to, that the injured employe should be taken care of as far as possible in that portion of the State where the injury originates and where adequate hospital and medical services are available, is correct. It decries the practice of attempts on the part of employers and insurance companies to reduce the standard fee system of the profession. It is true that in the past there has been injustice on both sides and in some cases the physician has attempted to charge fees out of proportion for the service rendered and has not followed the spirit of the law. On the other hand some insurance carriers have arbitrarily reduced fees without proper con-

ference with the physician. Most of these last cases have resulted from the action of clerks rather than responsible members of the insurance organization and the profession is cautioned on its side that it should be careful as to the amount of fees charged in a system so wide spread as the application of the industrial law. The law clearly indicates that the employer is the one who has the authority to designate the physician and this he may do through the insurance carrier. It is the understanding of the committee that the American Federation of Labor is in full accord with this principle as it has in mind the proper care of its members and fully realizes that the judgment of the employe or members of his family often leads to grave errors in treatment and that the employer and the insurance carrier may be in a much better position to choose the proper type of institution and the proper type of physician that should be designated to take care of the injured employe.

There is a tendency in some quarters for the grouping of cases in some medical center from all over the State. This tendency carries with it the possibility of a great deal of injustice being done various good hospitals and able men scattered over the State and except in rare instances where unusual cases occur or in those instances where large corporations have men in isolated districts, it is not believed to be the best method of procedure as it tends to interfere with established medical economics of the State.

However, the committee desires to emphasize the point that the proper and adequate care of the patient is paramount to everything else. If the physician and surgeon is without necessary experience or facilities, capable consultation should be had and the patient provided with means and measures to preserve life, function and form restoring him to family and economic status as soon as possible.

Intelligently supervised industry will recognize the value of trained employes and endeavor to conserve all manpower for by such action they will reduce their overhead and the ultimate expense to society.

FRED CLINTON,
O. S. SOMERVILLE,
PAT FITE.

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REPORT OF COMMITTEE ON CRIPPLED CHILDREN

At the meeting of the committee last year it was decided to send out to the doctors of the State a copy of the Crippled Children's law and information concerning Crippled Children's Clinics.

Through the secretary of the Society, Joe Hamilton, the work was accomplished. On February 22, 1930, Mr. Hamilton sent letters to each doctor in the State which decribed the method of holding clinics. He explained how clinics are planned in each county and arrangements for the examination made through the respective county chairmen and cooperation of the local medical association and civic clubs. The examinations are made and recommendations given in each case.

He further explained that all that was necessary to send a child to the Crippled Childrens' Hospital was to secure an order from the County Judge and the signature of the attending physician.

WADE SISLER,
EARL D. McBRIDE,
L. C. VANCE.

—o—

TUBERCULOSIS

Edited By
L. J. Moorman, M.D. and Floyd Moorman, M.D.
912 Medical Arts Bldg., Oklahoma City

The Effect of Parathyroid Extract and Calcium Upon Calcification and Healing in Pulmonary Tuberculosis. Burgess Gordon and A. Cantarow. American Review Tuberculosis, December, 1929.

Since calcification of a tuberculous lesion is considered an indication that the process is healed, numerous attempts have been made to promote calcification of such lesions by the administration of calcium salts. It is significant, perhaps, that the majority of favorable reports are the result of clinical observations since striking data have not been obtained from experimental studies, although Pelouze and Rosenberger found that the combined administration of parathyroid extract and calcium to animals resulted in a gain in weight and limitations of the extent of the tuberculous process.

Despite the fact that evidence has not been obtained in support of the theory that tuberculosis is associated with demineralization, and that no increase in calcification of tuberculous lesions in patients has been noted following calcium administration, the salts are still widely employed in the treatment of pulmonary tuberculosis. In addition to the use of calcium salts in disturbances of mineral metabolism parathyroid hormone has been widely employed.

In an investigation undertaken at the Chest Department of the Jefferson Hospital, Philadelphia, in 1925, parathyroid extract was administered to 60 tuberculosis patients (10 units twice daily) to determine the effect upon symptoms, calcfication and the course of the disease. The following data were noted: In most instances an increase in blood-calcium (1-3 mgm. per 100 c.c. of blood) was maintained (normal variation 9-11 mgm. per 100 c. c. of blood). There seemed to be a favorable influence upon strength and on vague muscular pains, and a transient sensation of warmth and dryness of the skin and mucous membranes were noted. Cough and amount of sputum were diminished in 34 patients; those patients with nonproductive cough experienced marked discomfort, due apparently to the increased dryness of respiratory passages; pain of acute pleurisy was relieved in 14 patients and in several instances a decidedly favorable effect upon haemoptysis occurred. There was no evidence of decalcification or increased calcium deposition in the lungs.

Since the use of parathyroid extract failed apparantly to influence calcification, further studies were undertaken. Parathyroid extract (20 units every 48 hours) and calcium lactate (30 grains three times daily) were administered to 14 patients with pulmonary tuberculosis for a period of one to six months. The results were

similar to those noted in the first group. Roentgenographic studies failed to reveal any change in calcification of the lung-fields or bones of the hands and there was no visualization of the blood-vessels.

The authors say: "It appears that diseased or potentially diseased tuberculous tissue is not influenced directly by hypercalcaemia and that parathyroid hormone and calcium should not be administered with the expectation of inducing calcification."

The Average Duration of Fatal Phthisis by Harry Lee Barnes and Lena R. P. Barnes. American Review of Tuberculosis, December, 1929.

The average duration of phthisis as previously tabulated has varied considerably at different times in different countries.

In order to compute the duration of a disease the dates of the onset and termination must be known. Because of the difficulty of diagnosing a slight tuberculous infection, the dates of onset are, with rare exceptions, unknown in all human cases of pulmonary tuberculosis. The onset of the disease, as estimated by this article, is based solely on the the patient's statement as to the time when his ill health began. The accuracy of these histories depends on the education of the patient, his knowledge of the disease, and on the experience in the work of the physicians who take them.

A factor influencing the duration of life in pulmonary tuberculosis is the financial status of the patients—the duration of life being considerably longer in wealth patients than that of patients in poorer circumstances.

Taking into consideration the factors previously mentioned which might influence the accuracy of these histories, the authors present the following statistics: (1) The average duration of life for the 1,567 males was 37.93 months, for the 970 females was 34.81 months, and for the 2,537 patients it was 36.72 months; (2) The average duration of life of 2,424 white patients was 37.81 months against 19.59 months for 111 colored patients, and 44.50 months for 2 yellow patients.

Studies on Changes in the Finger Nails in Pulmonary Tuberculosis with Special Reference to Pitting (Depressions) and Its Relationship to Active Disease, by Albert G. Hahn. American Review of Tuberculosis, December, 1929.

A description of phthisical incurvation of the nails appeared in literature as early as the beginning of the third century, but, since then, it is interesting to note that only a few references have been made to changes in the nails in tuberculosis.

A study of the nails of tuberculous patients has been made at Trudeau Sanatorium. The results of this study are based upon observations on 200 subjects, 150 of whom were suffering from pulmonary tuberculosis and fifty of whom acted as non-tuberculous controls (negative findings on X-ray, physical and bacteriological examinations). Periodical examinations were made on the finger nails of tuberculous patients during their residence at Trudeau Sanatorium. All abnormal changes were compared with other clinical data and the following conclusions were drawn: (1) Pittings or depressions in the finger nails were observed in 100 per cent in a group of patients suffering from active pulmonary tuberculosis as compared with 6 per cent of a group of patients who had been inactive for a relatively short period, and a third group of inactive cases (without symptoms of activity for from 1 to 25 years) in whom this change was found to be absent in 100 per cent of the cases studied. Therefore, it is the opinion of the authors that the occurrence of these characteristic pittings in a known case of pulmonary tuberculosis should be regarded as indicative of recently active tuberculous disease provided no other disease is present; (2) Hippocratic incurvation was found in 76 per cent of the active tuberculous group, 50 per cent of the inactive tuberculous group, and 30 per cent of the ex-patient workers at the Sanatorium. This change did not occur in any of the non-tuberculous controls; (3) Cyanosis of the finger nails was noted in 66 per cent of the active group as against only 2 per cent of the inactive or chronic group. This change was well marked in all cases in which the disease was rapidly advancing, as evidenced by clinical symptoms and roentgenographic studies. From these observations it is believed that cyanosis may be of value in prognosis; (4) Ridging seems to be of less importance than the other changes described.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M.D
717 North Robinson Street, Oklahoma City.

Traumatic Neurosis by Joseph Fetterman. J. Am. Med. Assn., xci, 315, August 4, 1928.

He believes traumatic neurosis is due to: (1) Hereditary or acquired weakness of the nervous system. This weakness may be brought about by prolonged sickness or by poor early training; (2) by shock from injury or fright; (3) by desire for sympathy or protection from disagreeable things in surroundings; (4) by a desire for compensation or revenge.

Symptoms: Hope is replaced by fear, calmness by anxiety. There are sleeplessness, palpitation and tremors. The symptoms of toxic goitre. The patient's mind is centered within himself and symptoms become exaggerated. He listens to his arteries beating and his heart against his chest wall.

The local symptoms are usually fixed on the area injured and there may be aches, pains, hysterical blindness, or paralysis.

Treatment: If symptoms are relieved after compensation, that does not prove that the patient is a malingerer, because many of the causes of his condition have actually been removed.

Dr. Fetterman believes treatment should begin in teaching fortitude and courage to the young. Neurosis is not found among Indians or natives of Labrador.

At the time of accident, treatment must be physical and mental; fright lessened; fears calmed. Early complete settlement should be made. For advanced cases psychotherapy is indicated. Careful examination and friendly advice is necessary to win confidence.

Arthroplasty of the Knee by W. C. Campbell. Surg. Gynec. Obstet., xlvii, 89, July, 1928.

The author's technique, which has been previously described, is given in detail. The indications, contraindications, and limitations are enumerated. This operation may be considered routinely, only when ankylosis is due to acute pyogenic infection or trauma. Multiple ankylosis renders the problem more difficult by interfering with after-treatment. In monarticular tuberculosis joints the operation is seldom indicated. Arthroplasty may be employed in low grade progressive arthritis, such as arthritis deformans, but the prognosis is less favorable. Shortening of more than three inches is a contraindication. Eburnation and osteoporosis of the bones on each side of the joint are unfavorable conditions. Extensive scar tissue with adhesions of the soft tissues about the joint should be eliminated by preliminary operation. The age should be between puberty and forty years. Special care to avoid too much motion is necessary in obese subjects. The occupation and social status of the patient are also important considerations. An analysis of fifty-seven cases is presented.

Contribution to the Study of Senile Osteomalacia by De Nito. Riforma Med., xliii, 126, Feburary, 1927.

Two personally observed cases of senile osteomalacia. Subjective symptomatology, clinical characteristics, and anatomic alterations of the type found in the adult. Onset with pains, soft bones, spontaneous fractures, nervous excitability, death by marasmus. Facts worthy of note are: localization, usually in the thorax and in the pelvis; flattening of the vertebrae; deformities of the sternum, of the clavicles and of the ribs; kyphosis of the spine; diminution of stature. Ordinarily there is not observed the deformity of the extremities which is a particular characteristic of osteomalacia of the adult. The identity of the two osteomalacic pictures, senile and puerperal, places on the table for discussion the value of the endocrine factor at the time of the onset of this process. In cases studied by the author, in one colloid goitre was found, in the other evidently hypophyseal alterations. (Studies of Honnicke, of Tolot and of Sarvonat).

CLINICAL CONFERENCES OF THE ST. LOUIS CLINICS

The St. Louis Clinics will depart from its usual procedure in conducting postgraduate courses in the fields of medicine and surgery. The Clinical Conference which will take place in St. Louis, Missouri, June 9 to 21, inclusive, will consist of a series of lectures, demonstrations, clinics and round-table luncheon discussions on medical and surgical subjects of interest to the general practitioner. No attempt will be made to arrange the material in special courses, but it has been so selected and arranged that practically all fields of medicine, surgery and allied subjects will be included.

St. Louis is fortunate in the possession of two outstanding medical schools of the country with a wealth of unsurpassed clinical material. The present conference is offered to give the profession an opportunity of coming into close contact with this valuable material and the many excellent local clinicians.

The subjects have been selected with the specific idea of assisting the practitioner who wishes to refresh his mind on many of the common things which are met with in general practice. The luncheon round-table discussions which will be participated in by several clinicians noted in their particular fields should be very interesting and most valuable. In these discussions an attempt will be made to carry out the symposium idea so that the subject will be completely covered.

Clinicians of national and international prominence have accepted the invitation to participate in the conferences. This type of clinical conference has a distinct place in post-graduate medical teaching. We congratulate the St. Louis Clinics upon the recognition of this idea and upon inaugurating the conference which doubtless will be an annual event.

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Examination held at State Capitol, Oklahoma City, March 11th and 12th, 1930.

The following applicants passed.

Name	Year of Birth	Place of Birth	School of Graduation	Year of Graduation	Home Address or Previous Location
Sharp, J. G.	1872	Texas	Ft. Worth Med.	1904	Francis, Okla.
Bowles, Wilhelmena B.	1892	Clarksville, Tenn.	Meharry Med.	1922	Langston, Okla.
Collier, Boy Norfleet	1900	Marhley, Texas	Univ. Louisville	1925	Tipton, Okla.
Davis, Arthur H.	1893	Beattyville, Ky.	Univ. Louisville	1919	Tulsa, Okla.
Davis, Robert Roe	1886	Canton, Ga.	Baylor Med.	1910	Westville, Okla.
Duffy, Francis Michael	1896	Williamsburg, Ia.	Creighton Univ.	1923	Enid, Okla.
Echrigh, Jerome Andrew	1901	Neola, Ia.	Creighton Univ.	1928	Elk City, Okla
Farrell, Edward Joseph	1882	Chicago, Ill.	Northwestern	1907	Tulsa, Okla.
Hartje, Harry Ferdinana	1894	Mineola, Ill.	Creighton Univ.	1921	Adair, Iowa
Huff, Karl Rhoten	1881	Hedrick, Iowa	Drake Univ.	1910	Lenox, Iowa
Huff, Leoman Dustin	1884	Hedrick, Iowa	Drake Univ.	1910	Lenox, Iowa
Jacobs, Minard Friedberg	1899	Kansas City, Mo.	Univ. of Mich.	1923	Okla City, Okla.
Knowles, Charles Erastus	1898	Springwater, N. Y.	Creighton	1924	Parsons, Kansas
Landers, Clyde Harrington	1904	Sillisca, Iowa	Harvard Med.	1928	Seminole, Okla.
MacKenzie, Ian	1903	Canada	McGill Univ.	1927	Tulsa, Okla.
Marshall, John Calhoune	1881	Hannibal, Mo.	Medio-Chirurgical	1904	Tulsa, Okla.
Parker, John A	1875	Howard, Mo.	K. C. Hahneman	1902	Kansas City, Mo.
Rinkel, Herbert John	1896	Illinois	Northwestern	1926	Okla. City, Okla.
Schmidt, Eleonora Louise	1894	Flucom, Mo.	Washington Univ.	1927	Norman, Okla.
Thompson, Herbert Orion	1898	Nashville, Tenn.	Vanderbilt	1926	Tulsa, Okla.
Walden, Dewey Hobson	1899	Melisa, Texas	Northwestern	1929	Okla City, Okla.
Agree, Aldred Alan	1902	Detroit, Mich.	Detroit Med.	1929	Elk City, Okla.

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Meeting Place, 1930, Shawnee.

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